CHAPTER 14

SEARCH AND RESCUE (SAR) EQUIPMENT

Section 14-1. Introduction

14-1. GENERAL.

14-2. Proper maintenance of Search and Rescue equipment is imperative to prevent malfunction, damage and corrosion. This chapter addresses a brief description and the inspection and maintenance of SAR equipment.

NOTE

If there is any doubt about the serviceability of a piece of SAR equipment, remove it from service and destroy it before discarding it or turning it in to supply.

Table 14-1 identifies the Item, Part Number, NSN, Level of Maintenance, Inspection Cycles and Procurement Information for end items and associated parts. Additional information regarding the usage and allowances of SAR equipment can be found in the following publications:

NTTP 3-50.1 (Search and Rescue Manual)
NAVAIR 00-35QH-2 (NAVAIR Allowance List)

14-3. MAINTENANCE.

14-4. Maintenance shall be performed by Organizational, Intermediate or Depot Level as identified by table 14-1. All maintenance actions shall be recorded in accordance with COMNAVAIRFORINST 4790.2.

14-5. SPECIAL INSPECTIONS.

NOTE

Inspection cycles have been updated to standardize the inspection cycles of SAR equipment. Updated inspection cycles shall take effect at the next scheduled inspection cycle.

Search and Rescue equipment that is found defective during the Place-In-Service Inspection shall be reported in accordance with COMNAVAIRFORINST 4790.2.

14-6. All SAR equipment shall be inspected in accordance with the applicable section of this Chapter. Special Inspections shall consist of a Place-In-Service, 90-Day, 180-Day, 365-Day and Load Tests as required. In addition, Pre-flight/Post-flight and Conditional Inspections shall be performed as necessary. Refer to table 14-1 for individual equipment inspection cycles.

14-7. Pre-flight/Post-flight. Pre-flight/Post-flight Inspections shall be performed by the aircrewman on all rescue equipment before and after each flight. Pre-flight and Post-flight Inspections are conducted to ensure rescue equipment, both personal and aircraft, are in proper working condition. Discrepancies found during a Pre-flight/Post-flight Inspections shall be reported immediately to maintenance personnel.

14-8. Conditional Inspection. A Conditional Inspection shall be performed anytime an item of rescue equipment has been excessively hard hit or has had a possible overstress occurrence. Inspection criteria for the item shall conform to the applicable section of this chapter.

1. Load Test. Unless otherwise identified in table 14-1, Load Tests are only required to be performed if an item of rescue equipment has been excessively hard hit, has had a possible overstress occurrence or has had a major component replaced that affected the weight and lifting requirements of the item.

14-9. CLEANING. Salt-water contamination will cause corroding and deterioration of materials and components. All SAR equipment and associated gear that has been exposed to or used in salt water shall be rinsed thoroughly with fresh water and wiped or hung to dry away from direct sunlight. Re-lubricate items as required by the applicable section of this chapter. Perform a Pre-flight Inspection before next usage.

14-10. REPAIR.

14-11. Stitching. All stitching requirements shall be Type 301 lockstitch, 8 to 10 stitches per inch. Backstitch a minimum of 1/2 inch unless otherwise stated. Use same type thread as original stitching.

Table 14-1. SAR Equipment Inspection and Procurement

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
Helicopter Rescue Equipment Bag, BGU-8/N	1682AS100-1	1680-01-243-4523	X		X				O	
Helicopter Rescue Equipment Bag, Small	261	4240-01-518-0932	X		X				O	LSC (H-60 use only)
HELICOPTER RESCUE EQUIPMENT BAG CONTENTS										
Cable Grip	MS90382-1	1680-00-511-2711	X		X				O	
MPLR Weak Link	Local P/N	Local mfg	X		X				O	The number of required weak links shall correspond to the number of liferafts installed in the aircraft.
Hoist Quick Splice w/Rescue Hook	Local mfg		X		X		X	X	O	
Hoisting Sling Assembly	190	1670-01-226-5300	X		X			X	O	
Cable Cutter	1490MTN	5110-00-224-7053	X		X				O	Approved Alternate for Pneumatic Hand Tool
Pneumatic Hand Tool	64A83H1-1	4240-00-177-9260	X		X				O/I	
Hoisting Gloves - Size 1 - Size 2 - Size 3 - Size 4 - Size 5	MIL-G-2366	 8415-00-268-7871 8415-00-268-7872 8415-00-268-7869 8415-00-268-7870 8415-00-268-7868	X		X				O	
Blanket	MIL-B-844	7210-00-082-5668	X		X				O	
Chemical Light Strap	230	4220-01-325-3133	X		X				O	
Aircrewmembers Safety Belt	MS16070-21	1680-01-133-9975	X		X				O	For Equipment Bag application only
Chemical Lights - 4-inch green - 6-inch yellow High Intensity - 6-inch IR	 AA55434 AA55132 908019	 6260-00-106-7478 6260-01-074-4230 6260-01-195-9752	X		X				O	
Cranial	HGU-25(V)2/P		X		X				O	Refer to NAVAIR 13-1-6.7-3
LPU-32/P	3335AS101-1	4220-01-440-1573	X		X				O/I	Refer to NAVAIR 13-1-6.1-2
LPP-1/A	68A94D2-1		X		X				O/I	No longer available. Use until no longer serviceable

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
AIRCRAFT INSTALLED EQUIPMENT										
Rescue Strop	216-1	1680-01-347-4946	X		X			X	O	
Quick Strop	214	Open Purchase	X		X				O	LSC
Cable Weight Cover	60A138H4	1680-00-511-2714	X		X				O	
Trail Line Assembly	220	4010-01-312-4854	X		X				O	
- Trail Line Pack	221	1680-01-226-5135								
- Trail Line Gloves or Line Handling Gloves	MIL-G-2366 225	Multiple NSN's Open Purchase								 LSC
- Shot Bag	224	1680-01-236-4663 or Open Purchase								LSC
- Rope	220-2	Open Purchase								LSC
- V-strap	220-3	Open Purchase								LSC
70-Foot Trail Line Assembly	220-S	Special Order	X		X				O	LSC and for **training only**.
MEDEVAC Litter	402	6530-01-187-0104	X		X			X	O	
- Stowage Container	402-1	Open Purchase								LSC
- Frame Cover w/Restraint Straps	402-2	Open Purchase								
- Flotation Pad, Front	402-3	Open Purchase								
- Flotation Pad, Back	402-4	Open Purchase								
- Carrying Harness	402-8	Open Purchase								
- Vertical Hoisting Sling	402-7	Open Purchase	X		X			X	O	
Stokes Litter	9-1047	6530-01-315-4784	X		X				O	
Flotation Kit Assembly	101	4220-01-329-6420	X		X				O	
- Log Foam	130	Open Purchase								LSC
- Log Covers	110	Open Purchase								
- Retainer Straps	150	Open Purchase								
- Restraint Straps	140	Open Purchase								
- Chest Pad Foam	103-3	Open Purchase								
- Chest Pad Cover	103-4	Open Purchase								
- Ballast Bar	170	Open Purchase								
Rescue Net	X-872-SF	1670-01-172-3592	X		X				O	
Collapsible Rescue Basket	495	TBD	X		X				O	LSC

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
AIRCRAFT INSTALLED EQUIPMENT (Cont)										
Forest Penetrator	K26-1000-9	4240-00-199-7353	X		X				O	
Rescue Seat	420	4240-01-465-2302	X		X			X	O	
Electric Sea Marker Light, (SDU-36/N) - 6 Volt Battery	1702AS100-1 BA803/U	6230-01-262-1812 6135-00-100-0413	X		X				O	Inspection cycle of the electric sea marker light (SDU-36/N) may be increased at discretion of squadron commander. The SDU-36N is no longer being manufactured. The automatic crew-overboard marker light is the replacement as authorized by SARMM. SDU-36N's shall remain in service until no longer serviceable.
Automatic Crew-Overboard Marker Light - 6 Volt Battery	ACR/SM-2 BA803/U	6230-01-143-4778 6135-00-100-0413	X		X				O	The automatic crew-overboard marker light is the replacement for the SDU-36N. The battery shall be replaced annually.
RAPPELLING AND TREE EXTRACTION EQUIPMENT										
Descent Control Device	14G-0	Open Purchase	X		X				O	Descent Control Inc
Rappel Ropes w/bags - 150 ft Rope - Bag - 250 ft Rope - Bag	 L-4-150 15C1 L-4-250 15C2	 Open Purchase Open Purchase Open Purchase Open Purchase	X		X			X	O	 Descent Control Inc
Basic Rappel Harness - Small (26-30 inches) - Medium (30-34 inches) - Large (34-38 inches) - X-large (38-42 inches) - XX-large(42-46 inches)	 202512 202513 202514 202515 202516	 1680-01-453-9830 1680-01-453-9806 1680-01-453-9820 1680-01-453-9834 1680-01-453-9839	X		X				O	

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
RAPPELLING AND TREE EXTRACTION EQUIPMENT (Cont)										
Pro Series Rescue Harness - Small (26-30 inches) - Regular (30-44 inches) - X-Large (42-46 inches)	 202172 202174 202175	 Open Purchase NSN's will be assigned. Until NSN's are assigned, harnesses may be opened purchased.	X		X				O	CMC Rescue. The Pro Series Rescue Harness is the replacement for the Basic Rappel Harness. The Basic Rappel Harness is still authorized for use until no longer serviceable.
Carabiners - Locking (Type II) - Non-locking (Type III)	 A-A-50041 A-A-50041	 8465-01-322-7432 8465-01-322-7433	X		X				O	
Spring Loaded Belay Plate	434507	Open Purchase	X		X				O	Liberty Mountain Sports
540 Belay Device	TBD	TBD								TBD
Dynamic Rope (Kernmantle) 11mm	440230	Open Purchase	X		X			X	O	Liberty Mountain Sports
Static Rope	TBD	TBD								TBD
Tubular Nylon Strap	MIL-W-5625	8305-00-753-6529	X		X				O	Cut to desired lengths
Hoisting Vest	TBD	Open Purchase	X		X				O	TBD
Climber Belt	A-A-1977	4240-00-926-4154	X		X				O	
Climber Strap	A-A-1776	4240-00-725-9715	X		X				O	
Climber Spikes	A-A-1109	4240-00273-9668	X		X				O	
Climbers Helmet - Headlamp	471157 2030 TBD	Open Purchase Open Purchase Open Purchase	X X	 X	X				O O	REI Northwest River Supply
V-Bladed Rescue Knife - Replacement Blade	RN2 RKB-G	5110-00-524-6924 5110-00-098-4326	X		X				O	
Rescue 8	312871	Open Purchase	X		X				O	CMC Rescue
Gloves, Rappelling		Open Purchase	X		X				O	Open purchase gloves must be full fingered.
Sven Folding Saw - Blades	370830 370831	Open Purchase Open Purchase	X X		X X				O	Liberty Mountain Sports
Rescue Pulleys - 2-inch Single - 2-inch Double	 3155000 31550	 Open Purchase Open Purchase	X\		X				O	CMC Rescue
Entrenching Tool	A-A-59337	5120-00-878-5932	X		X				O	

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
MEDICAL EQUIPMENT										
Level A Medical Kit	MODEL251	6545-01-157-9112	X		X				O	Medical items must be ordered separately, refer to NTTP 3-50.1 for list of required items.
Level B Medical Kit	CN95-0286	6545-01-416-9510	X		X				O	Medical items must be ordered separately, refer to NTTP 3-50.1 for list of required items.
Level C Medical Kit	LBT-1652B	6530-01-452-3226	X		X				O	The Level C Medical Kit for use by the HCS-4 and HCS-5 community only. Medical items must be ordered separately, refer to NTTP 3-50.1 for list of required items.
SAR AIRCREWMAN PERSONAL EQUIPMENT										
WETSUIT ENSEMBLE										
- Divers Suit (Shorty)			X	X					O	
- Men's:	MNP461-GL-S	4220-01-441-2321								
	-M	-2327								
	-ML	-2379								
	-L	-2385								
	-XL	-2471								
	-XXL	-2475								
- Women's:	FMNP461-GL-S	4220-01-441-2490								
	-M	-2502								
	-ML	-2864								
	-L	-2867								
	-XL	-2870								
	-XXL	-2874								

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Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
SAR AIRCREWMAN PERSONAL EQUIPMENT (Cont)										
- Instructor Shorty			X	X					O	
- Men's:	MNT1462-GL-S	4220-01-441-3852								
	-M	-3855								
	-ML	-3861								
	-L	-3864								
	-XL	-4283								
	-XXL	-4286								
- Women's:	FMNT1462-GL-S	4220-01-441-4291								
	-M	-4302								
	-ML	-4344								
	-L	-4351								
	-XL	-4356								
	-XXL	-4813								
- Jacket			X	X					O	
- Men's:	MNP452-4GL-S	4220-01-441-1272								
	-M	-1359								
	-ML	-1366								
	-L	-1372								
	-XL	-1573								
	-XXL	-1574								
- Women's:	FMNP452-4GL-S	4220-01-441-1757								
	-M	-1768								
	-ML	-1802								
	-L	-1812								
	-XL	-1847								
	-XXL	-1934								
- Trousers (Farmer John)			X	X					O	
- Men's:	MNPFJ442-1GL-S	4220-01-441-3389								
	-M	-3391								
	-ML	-3424								
	-L	-3425								
	-XL	-3488								
	-XXL	-3495								
- Women's:	FMNPFJ442-1GL-S	4220-01-441-3499								
	-M	-3502								
	-ML	-3683								
	-L	-3686								
	-XL	-3688								
	-XXL	-3691								

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
SAR AIRCREWMAN PERSONAL EQUIPMENT (Cont)										
- Hood			X	X					O	
	MNP601-GL-XS	4220-01-441-2912								Open Purchase information AMRON INTL
	-S	-2920								
	-M	-2925								
	-ML	Open Purchase								
	-L	-2984								
	-XL	-2999								
	-XXL	Open Purchase								
- Gloves			X	X					O	
- (2mm Neoprene Black)	3462AS106-1	4220-01-441-2885								For use in warm water environments
	-2	-3369								
	-3	-2898								
	-4	-3399								
	-5	-3423								
- Gloves (Titanium)			X	X					O	
- (3mm)	33201-1 (XS)	Open Purchase								AMRON INTL (for use in cold water environments)
- (5mm)	-2 (S)									
	-3 (M)									
	-5 (L)									
	-6 (XL)									
	35201-1 (XS)									
	-2 (S)									
	-3 (M)									
	-5 (L)									
	-6 (XL)									
Superzip			X	X					O	
- 3mm (sizes 5-13)	93201	Open Purchase								AMRON INTL
- 5mm (sizes 5-13)	95201									
- 6.5mm (sizes 5-13)	96201									
- 6.5mm Bigfoot (sizes 14-16)	96211	4220-01-441-4492								

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
SAR AIRCREWMAN PERSONAL EQUIPMENT (Cont)										
Echozip Boots			X	X					O	
- 3mm (sizes 5-13)	93001	Open Purchase								AMRON INTL
- 5mm (sizes 5-13)	95001									
- 6.5mm (sizes 5-13)	96001									
- 5mm Bigfoot (sizes 14-16)	95161									
Koral King Boots			X	X					O	
- 5mm	DEP-95211-5	4220-01-441-3737								
	-6	-3800								
	-7	-3827								
	-8	-3853								
	-9	-3904								
	-10	-4086								
	-11	-4273								
	-12	-4334								
	-13	-4368								
Wraparound Mask			X	X					O	
- Black	5026-00	4220-01-225-1611								
- Clear	5026-09	Open Purchase								US Divers
- Black	543	Open Purchase								LSC
- Clear	544	Open Purchase								LSC
- Chemlight Bar	1681AS201-1	5340-01-355-4960								
		Open Purchase								LSC
- Strap	5077-09	4220-01-227-7508								
- Strap Clips										
- Plastic	5026-07	Open Purchase								Open Divers
- Metal	5026-08	Open Purchase								Open Divers
Wraparound Mask II			X	X					O	
- Black	5026-20	Open Purchase								US Divers
- Strap Clips	Same as Wraparound									
- Chemlight Bar	Same as Wraparound									

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
SAR AIRCREWMAN PERSONAL EQUIPMENT (Cont)										
Sherwood Magnum-4 Mask - Strap - Clamp (Chemlight) - Screw - Nut (Self-locking)	 SWMA25 TBD 2019100-0707 NAS602-8 MS21044C08	 Open Purchase 5340-00-964-2557 5305-01-350-4928 5310-00-982-6814	X	X					O	Diver's Den
Snorkel - Snorkel stSp	7369-30 7316-05	4220-01-227-7503 4220-01-228-0946	X	X					O	
Fins - X-Small - Large - X-Large - XX-Large Scuba Pro	 6315-00 6211-10 6216-00 25-352-000	 4220-01-227-6017 4220-01-015-6762 4220-01-220-5816 4220-01-077-5251	X	X					O	
Fin, Rocket Fin II - Large (9 - 11) - Super (12+) - Buckle Kit (2) - Replacement Strap	 621130 621135 621131 621132	 Open Purchase	X	X					O	US Divers
AMPHIB Boot - Size 7 - Size 8 - Size 9 - Size 10 - Size 11 - Size 12 - Size 13	 D93751-07 -08 -09 -10 -11 -12 -13	 Open Purchase	X	X					O	US Divers (for use with Rocket Fin II only)
SAR Drysuit	MSD 565								O/I/D	Currently distributed by SARMM Office Refer to NAVAIR 13-1-6.7-2
Rescue Swimmer Trunks	MIL-DTL-29112	8415-00-455-6347 8415-00-455-6348 8415-00-455-6349 8415-00-455-6350 8415-00-455-6351 8415-00-455-6352 8415-00-455-6353								The upkeep and cleanliness of the SAR Swimmers Trunks are the responsibility of the SAR crewman.

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
SAR AIRCREWMAN PERSONAL EQUIPMENT (Cont)										
Rescue Mountain Boots - Sizes 5 thru 13	MIL-B43739	8430-00-458-xxxx	X	X					O	
Signaling Sleeves	465	Open Purchase	X	X					O	LSC
TRISAR			X	X					O	
- Complete Assembly	487MB 487LB 487XLB 487XXB	Open Purchase								LSC
- Harness	487HMB 487HLB 487HXLB 487HXXB	Open Purchase								LSC
- Flotation Vest	487VB	Open Purchase							I	LSC
HBU-23/P	205	4240-01-395-8413	X	X					O	
LPU-28/P	482	4240-01-463-0197	X	X					I	
SRU-40B/P 1586AS301-3	1028-00	4240-01-461-2015	X	X		X			O/I	
- First Stage Assembly	1028-74	1660-01-440-9604								All SRU-40 series Helicopter Aircrew Breathing Devices are on a 360 day inspection cycle.
- Second Stage Assembly	1028-72	1660-01-440-9603								
- Hose Assembly	1028-75	4240-01-438-8410								
- 1st Stage Service Kit	1028-81	4240-01-440-9640								
- 2nd Stage Service Kit	1028-82	4240-01-438-9908								
SAR HABD Holster	100659	Open Purchase	X	X					O	US Divers
TRISAR AND HBU-23/P SURVIVAL EQUIPMENT ITEMS										
SDU-39/N	FRS/MS2000M	6230-01-411-8535	X	X					O	Refer to appropriate chapter or manual for inspection of Survival Items.
MK-124 MOD 0	DL3139734	1370-01-030-8330	X	X					O	
Hook Blade Knife	823AS101-1	1670-01-088-4654	X	X					O	
Chem-light (4-inch)	9-74780	6260-00-106-7478	X	X					O	
Chem-light (6-inch)	95270-52	6260-01-074-4230	X	X					O	
SAR Knife/Scabbard	358	4220-01-278-3007	X	X					O	
Emerson SAR Knife	N-SAR (BTS)	Open Purchase	X	X	X				O	
SAR Swimmer's Radio			X	X					O/I/D	
- AN/PRC-149	2155-09093-00	5826-01-466-0186								
- AN/PRC-149A	TBD	TBD								
- Swimmer Control Unit	2155-09073-00	5998-01-466-0183								

Table 14-1. SAR Equipment Inspection and Procurement (Cont)

Item	P/N	NSN	Inspection Cycles							Notes
			PIS	90 Day	180 Day	365 Day	Load Test	Cond. Insp.	O/I/D Level Maint	
MISCELLANEOUS ITEMS										
Wetsuit Repair Kit	DD-WSRK-2PC	4220-00-912-9849								
Rappelling Rope Bags	TBD	Open Purchase								Rappelling rope bags and equipment bags shall be commercially purchased per local command requirements. Bags shall be inspected at the same time the equipment is inspected.
Equipment Bags	TBD	Open Purchase								
Rescue Swimmer Gear Bag	304	Open Purchase								LSC Gear Bag shall be inspected at the same time the equipment is inspected.

CONTACT INFORMATION FOR OPEN PURCHASE EQUIPMENT		
SAR Model Manager Office (SARMM) NAS North Island, CA DSN 735-2479 (619) 545-2479	Lifesaving Systems Corp (LSC) 220 Elsberry Rd Apollo Beach, FL 33572-2289 (813) 645-2748 http://www.lifesavingsystems.com/	REI (800) 426-4840 http://rei.com
Descent Control Inc. 3920 Ayers Rd. Fort Smith, AR 72908 (800) 643-2539 (501) 646-4382	Divers Den 4833 East Highway 98 Panama City, FL 32404-1606 (800) 272-4777 (850)-874-0515	Emerson Knives Inc. P.O. Box 4180 Torrence, CA 90510-4180 POC: Derek Russell, Sales Manager (310) 212-7455 FAX (310) 212-7289
Liberty Mountain Sports 4375 West 1980 South Suite 100 Salt Lake City, UT 84104 (800) 366-2666 http://libertymountain.com/	Northwest River Supply 2009 South Main St Moscow, ID 83843 (800) 635-5202 http://www.nrsweb.com/	CMC Rescue, Inc. P.O. Box 6870 Santa Barbara, CA 93160-6870 800-235-5741 (ask for military sales) http://www.cmcrescue.com
AMRON INTL (760) 746-3834 Email: sales@amronintl.com http://www.amronintl.com/	US Divers (Aqualung) Military Sales (800) 252-3483 (760) 597-5081 Email: sryan@aqualung.com http://aqualung.com/	

Section 14-2. Helicopter Rescue Equipment Bag

14-12. DESCRIPTION.

14-13. The Helicopter Rescue Equipment Bag (P/Ns 261 and 1682AS100-1) (figure 14-1), also referred to as "SAR Bag or SAR Curtain", is made of heavy-duty lightweight International orange denier nylon with labeled pockets for storage of rescue equipment. It can be folded or hung vertically with equipment installed.

14-14. The addition of rescue equipment stowed in the SAR bag is used to assist the SAR crewman in the performance of his/her duties during the SAR mission. Each item of rescue equipment is stowed in a designated pocket of the SAR bag for easy access. For the list of required rescue equipment, refer to NTTP 3-50.1.

14-15. MODIFICATION.

14-16. There are no modifications for the SAR Bag that are required or authorized.

14-17. MAINTENANCE.

14-18. INSPECTION. All SAR Bags shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-19. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-20, steps 1 thru 7 and 10.

14-20. Special Inspection. To perform the Special Inspection of the SAR Bag, proceed as follows:

1. Inspect material for cuts, tears and rips.

2. Inspect stitching for broken, loose or fraying stitches.

3. Inspect snap hooks for proper operation and security of attachment.

4. Inspect handles for security of attachment.

5. Inspect metal components for corrosion.

6. Inspect for contaminants such as oil, grease, fuel, salt-water residue, etc.

7. Inspect markings on pockets for legibility.

8. Repair SAR Bag in accordance with paragraph 14-21.

9. Clean SAR Bag in accordance with paragraph 14-22.

10. Install inspected rescue equipment into designated pockets as required by NTTP 3-50.1.

14-21. REPAIR. Repair of the SAR Bag shall consist of patching of minor tears, stitching of broken or fraying stitches, replacement of broken components and replacement of markings. Unlimited repairs are authorized, however, replace SAR Bag when no longer practical to repair. Replace markings using an indelible marking pen.

14-22. CLEANING. Contaminated SAR Bags shall be cleaned as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse bag with clean fresh water.

2. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

3. Rinse bag a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

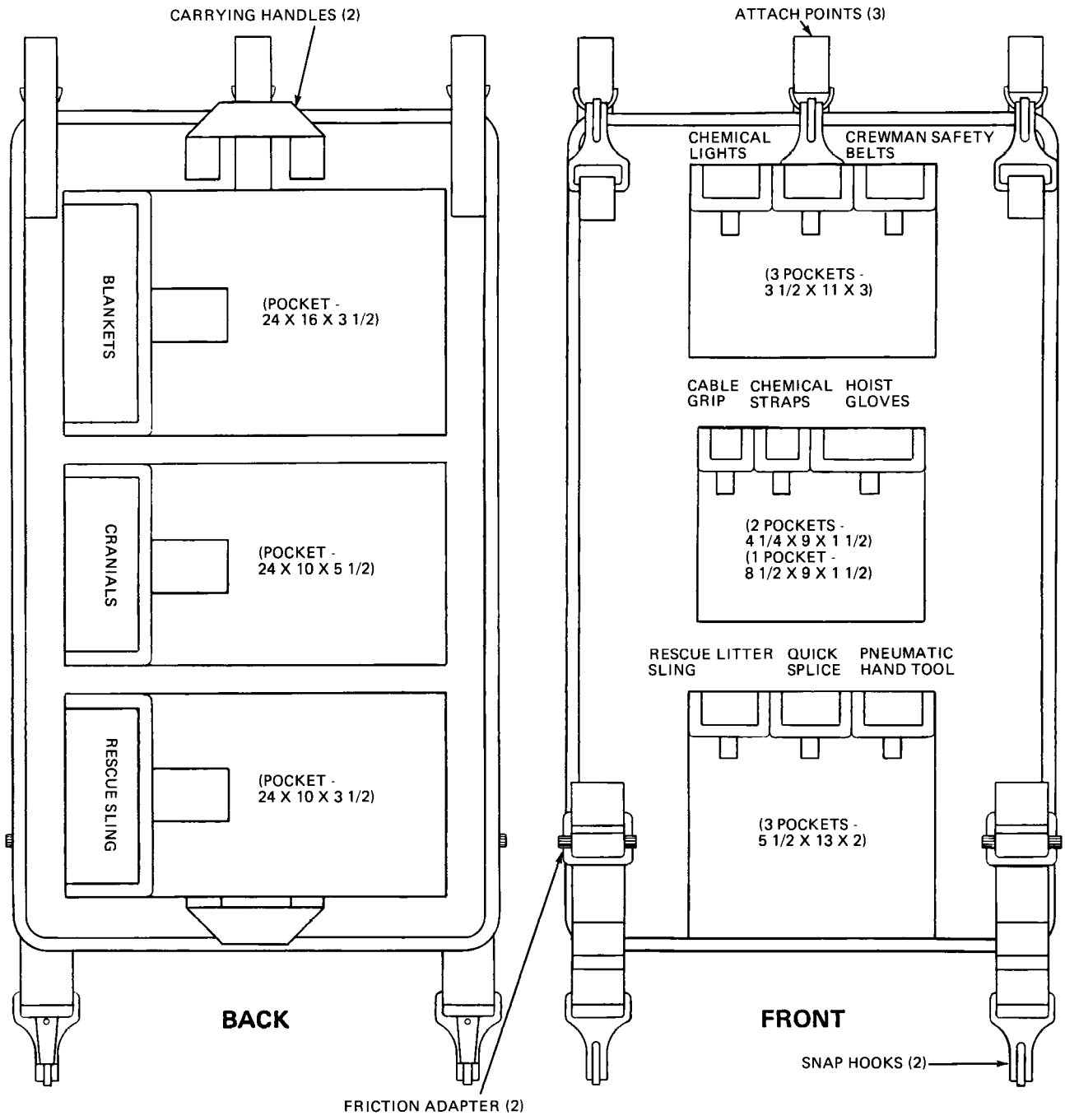

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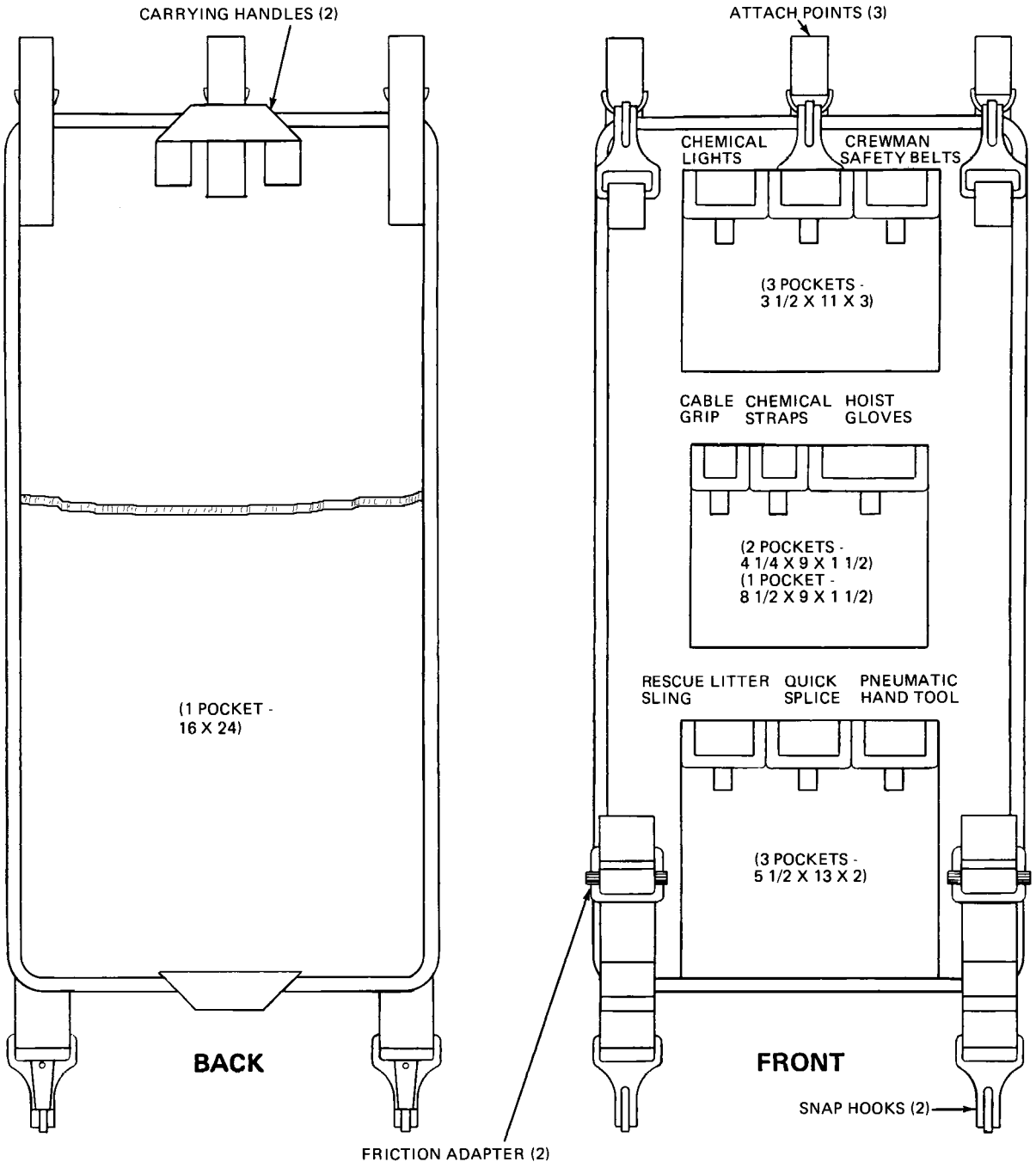
Figure 14-1. Helicopter Rescue Equipment Bag (Sheet 1 of 2)



NOTE: P/N 261 IS AUTHORIZED FOR USE IN THE H-60 AIRCRAFT.

P/N 261

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Figure 14-1. Helicopter Rescue Equipment Bag (Sheet 2 of 2)

Section 14-3. Helicopter Rescue Equipment Bag Contents

14-23. GENERAL.

14-24. The following rescue equipment is part of the Helicopter Rescue Equipment Bag.

Section 14-3.1. Cable Grip

14-25. DESCRIPTION.

14-26. In the event of a Rescue Hoist failure, the Cable Grip (figure 14-2) can be attached to the hoist cable and aircrewmans safety belt. The Cable Grip is capable of supporting 1,000 lbs.

14-27. MODIFICATION.

14-28. There are no modifications for the Cable Grip that are required or authorized.

14-29. MAINTENANCE.

14-30. INSPECTION. All Cable Grips shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-31. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-32, steps 1 thru 4.

14-32. Special Inspection. To perform the Special Inspection of the Cable Grip, proceed as follows:

1. Inspect for missing, bent, fractured, or damaged components.

2. Check hardware for security of attachment, corrosion, wear, and ease of operation.

3. Inspect for contaminants such as dirt, fuels, saltwater residue, etc.

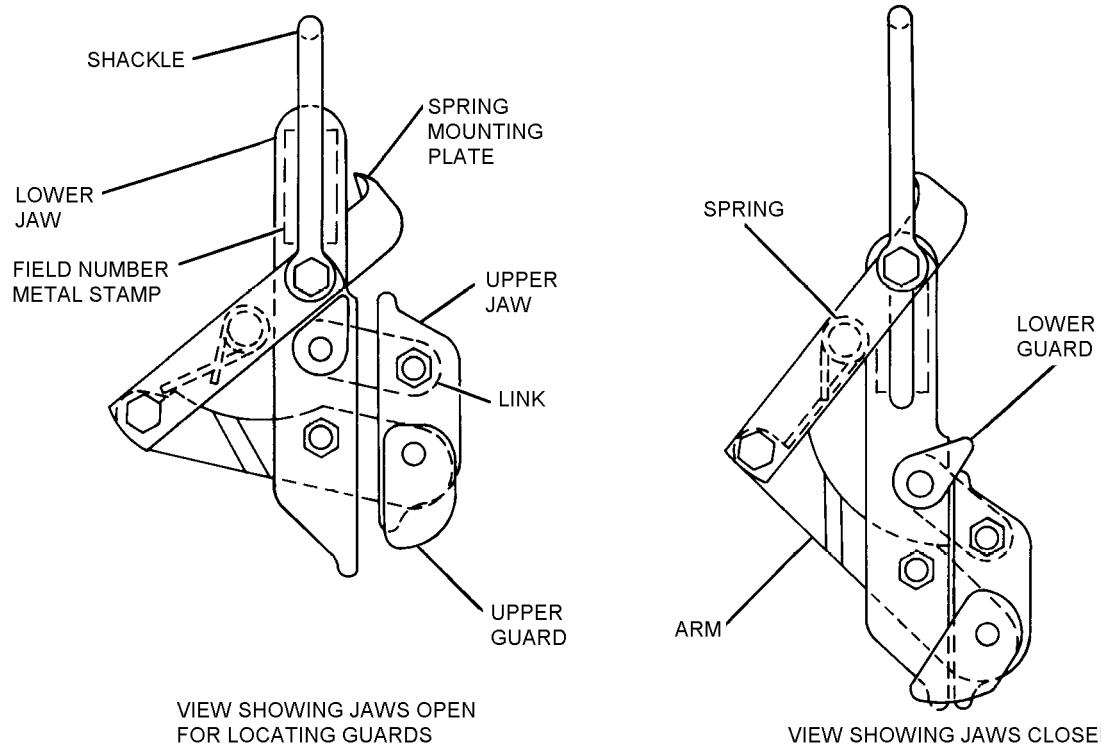

Figure 14-2. Cable Grip, Parts Nomenclature

4. Check for sharp edges and projections.

5. Repair Cable Grip in accordance with paragraph 14-33.

6. Clean Cable Grip in accordance with paragraph 14-34.

14-33. REPAIR. Repairs are limited to removal of corrosion, cleaning, lubrication and the filing of burrs and nicks as necessary. For all other discrepancies, the Cable Grip shall be replaced.

14-34. CLEANING. To clean the Cable Grip, proceed as follows:

NOTE

Corrosion that cannot be removed shall render the item non-RFI and it shall be removed from service and replaced.

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Lubricating Oil, General Purpose	VV-L-800

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Use low-pressure air to remove foreign objects.

3. Remove contaminants using a mixture of water and detergent and a cloth.

4. Rinse thoroughly in clean water to remove soap and contaminants.

5. Dry with a clean cloth or low-pressure air.

6. Lubricate Cable Grip moving parts with lubricating oil and wipe excess using a cloth.

14-35. ILLUSTRATED PARTS BREAKDOWN.

14-36. The Illustrated Parts Breakdown lists and illustrates the assemblies and detail parts of the Cable Grip.

14-37. The Illustrated Parts Breakdown should be used when requisitioning and identifying parts.

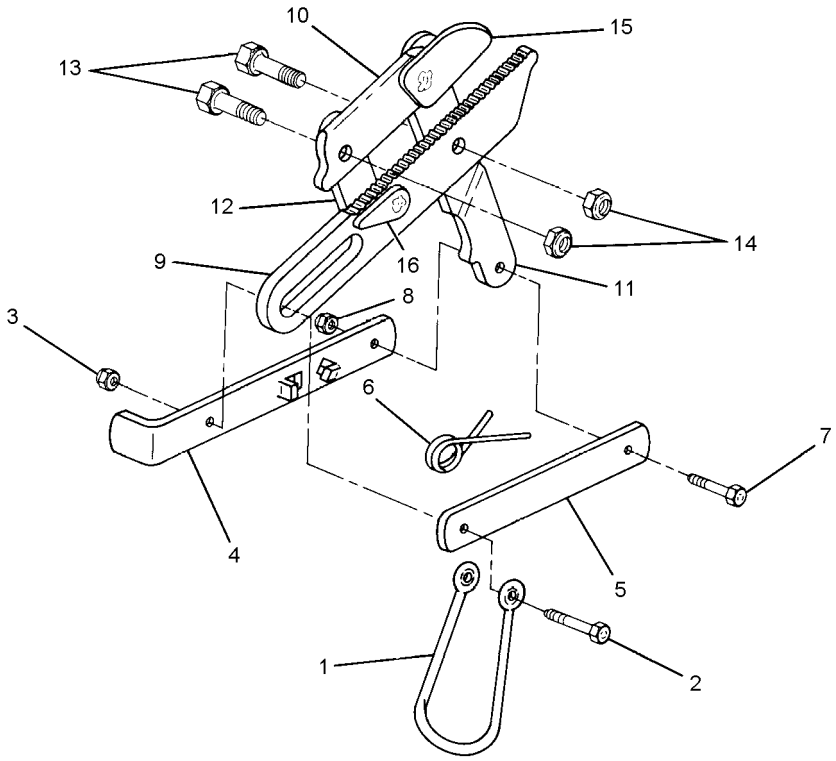

Figure 14-3. Cable Grip

Section 14-3.1.1 Multi Place Life Raft (MPLR) Weak Link

14-37.1 GENERAL.

14-37.2 The MPLR Weak Link is designed to be used in conjunction with the LRU-30A/A (8-man), LRU-31A/A (12-man) and LRU-32A/A (20-man) multi-place life rafts when deploying rafts to survivors at sea. Refer to NTTP 3-50.1 for usage and deployment procedures.

NOTE

MPLR Weak-Link(s) shall be stored inside the cable grip pocket of the helicopter rescue equipment bag. The number of required weak links shall correspond to the number of life-rafts installed in the aircraft.

14-37.3 MAINTENANCE.

14-37.4 The MPRL Weak Link shall be locally manufactured in accordance with paragraph 14-37.9. The weak link shall have a visual inspection at the same inspection interval as the helicopter equipment rescue bag.

14-37.5 INSPECTION.

14-37.6 Inspect MPLR Weak Link as follows:

1. Inspect cord and snap hooks for contamination and corrosion.

2. Inspect snap hooks for proper operation.

3. Repair in accordance with paragraph 14-37.7.

14-37.7 REPAIR.

14-37.8 Repairs are limited to the replacement of either the Type I cord or snap hook(s) and shall be accomplished in accordance with paragraph 14-37.9.

14-37.9 FABRICATION.

14-37.10 Fabricate MPLR Weak Link as follows:

Materials Required

Quantity	Description	Reference Number
2	Snap Hook, 2 5/32 inch	(Note 1)
As Required	Nylon Cord, Type I	NIIN 01-214-5128 MIL-C-5040

Note 1: Snap Hook, P/N 365, shall be ordered from the following source:

Life Saving Systems Corp.
220 Elsberry Road
Apollo Beach, FL 33572-2289
(813) 645-2748
www.lifesavingsystems.com

14-37.11 Finished length between the two snap hook rings shall be 3-inches plus or minus 1/2-inch. Cut a 12-inch length of Type I nylon cord and sear end. Tie an overhand knot at one end of nylon cord. Loop that end of the nylon cord through one snap hook ring and secure with a bowline knot. Loop the opposite end of the nylon cord around the other snap hook ring. Distance between snap hook rings shall be 3-inches plus or minus 1/2-inch. Secure with a bowline knot followed by an overhand knot. Cut and sear excess cord.

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Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
14-3	MS90382-1	GRIP, Cable	1	
-1	MS90382-9	. SHACKLE (ATTACHING PARTS)	1	
-2	NAS1304-16	. BOLT, Machine	1	
-3	MS20364D428	. NUT, Self-Locking ---*---	1	
-4	MS90382-4	. PLATE, Spring mounting	1	
-5	MS90382-3	. PLATE, Spring retaining	1	
-6	MS90382-11	. SPRING	1	
-7	MS90382-8	. BOLT, Machine	1	
-8	MS20364D428	. NUT, Self-Locking	1	
-9	MS90382-2	. JAW, Lower	1	
-10	MS90382-5	. JAW, Upper	1	
-11	MS90382-6	. ARM	1	
-12	MS90382-10	. LINK	1	
-13	NAS1306-8	. BOLT, Machine	2	
-14	MS20364D624	. NUT, Self-Locking	2	
-15	MS90382-8	. GUARD, Upper	1	
-16	MS90382-7	. GUARD, Lower	1	

Section 14-3.2. Double Rescue Hook

14-38. DESCRIPTION.

14-39. There are two Double Rescue Hooks (P/N MS18027-2A) (figure 14-4) that are part of the total SAR equipment ensemble. One is the Double Rescue Hook that is attached to the aircraft hoist assembly and the other is attached to the Hoist Quick Splice. The Double Rescue Hook is designed to connect personnel and/or equipment to the aircraft hoist assembly during sea and land rescue operations. The Double Rescue Hook consists of a large spring-loaded hook that supports 3,000 lbs, a small spring loaded hook that supports 1,000 lbs and a bottom ring which supports 1,500 lbs. A bearing at the top of the hook allows the hook to rotate freely about its axis.

14-40. MODIFICATION.

14-41. There are no modifications for the Rescue Hook that are required or authorized.

14-42. MAINTENANCE.

NOTE

Double Rescue Hooks that are attached to the aircraft Rescue Hoist assembly are considered aircraft installed equipment and shall be inspected in accordance with applicable aircraft MRCs.

14-43. INSPECTION. Inspection of the Double Rescue Hook shall be performed in accordance with paragraph 14-52 of this manual.

14-44. ILLUSTRATED PARTS BREAKDOWN.

14-45. The Illustrated Parts Breakdown lists and illustrates the assemblies and detail parts of the Rescue Hook.

14-46. The Illustrated Parts Breakdown should be used when requisitioning and identifying parts.

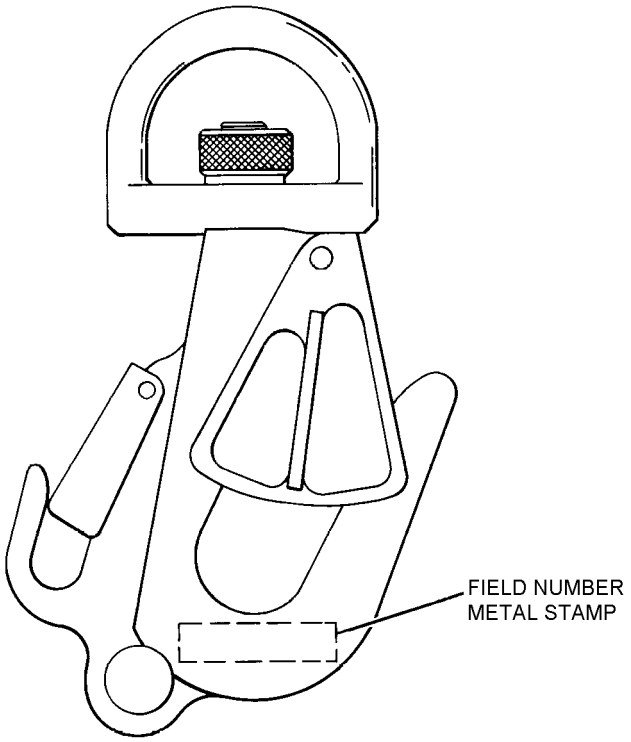

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Figure 14-4. Double Rescue Hook (MS18027-2A)

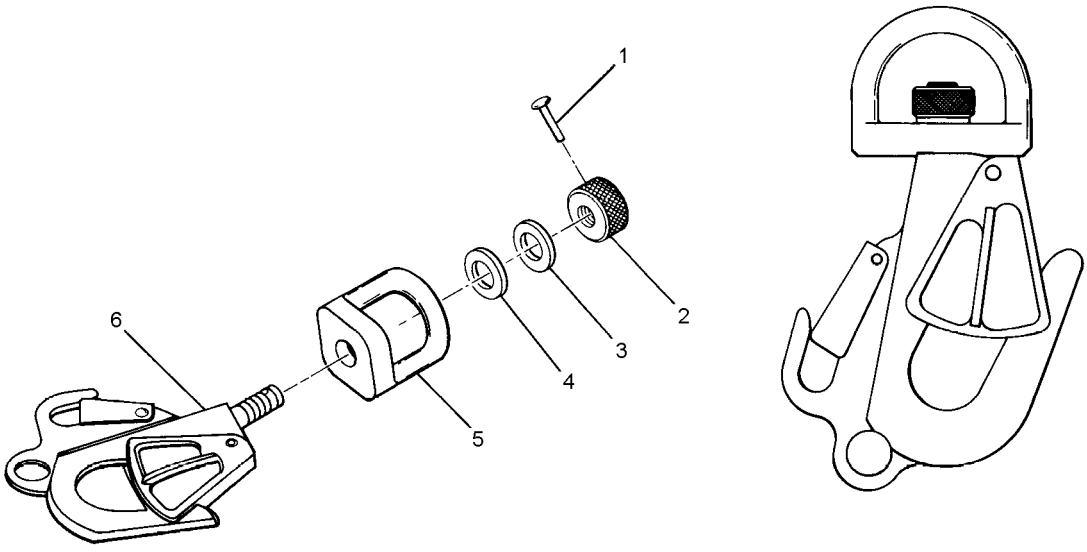

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Figure 14-5. Double Rescue Hook

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
14-5	MS18027-2A	RESCUE HOOK ASSEMBLY	1	
-1	MS20613-3C14	. RIVET	1	
-2	MS10827-8	. NUT, Knurled	1	
-3	MS18027-9	. WASHER	1	
-4	AN960-C816-L	. WASHER	1	
-5	MS18027-6	. FITTING, Swivel	1	
-6	MS18027-2	. BODY, Hook	1	

Section 14-3.3. Hoist Quick Splice

14-47. DESCRIPTION.

14-48. The Hoist Quick Splice (figure 14-6) is a device used by rescue personnel in the event that the hoist cable of the helicopter has been cut or broken. The Hoist Quick Splice is locally manufactured. Refer to paragraph 14-57.

14-49. MODIFICATION.

14-50. There are no modifications for the Hoist Quick Splice required or authorized.

14-51. MAINTENANCE.

14-52. INSPECTION. The Hoist Quick Splice shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-53. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-54, steps 1 thru 6.

14-54. Special Inspection. To perform the Special Inspection of the Hoist Quick Splice, proceed as follows:

1. Inspect Rescue Hook for missing, bent, fractured or damaged components.

2. Inspect cable swags for security of attachment.

3. Inspect cable for broken wires.

4. Inspect aluminum plate for nicks and burrs.

5. Inspect for legibility of numbering and arrows.

6. Inspect for corrosion and contaminants such as dirt, fuels, salt-water residue, etc.

7. Repair Hoist Quick Splice in accordance with paragraph 14-55.

14-55. REPAIR. Repair Hoist Quick Splice as follows:

1. Remove corrosion and contaminants, clean and lubricate in accordance with paragraph 14-56.

2. Replace cable in accordance with paragraph 14-57, steps 5 thru 11.

3. File nicks and burrs smooth using a file or emery cloth.

4. Replace numbers and arrows as previously made.

14-56. CLEANING. To clean the Hoist Quick Splice, proceed as follows:

NOTE

Corrosion that cannot be removed shall render the item non-RFI and it shall be removed from service and replaced.

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Lubricating Oil, General Purpose	VV-L-800

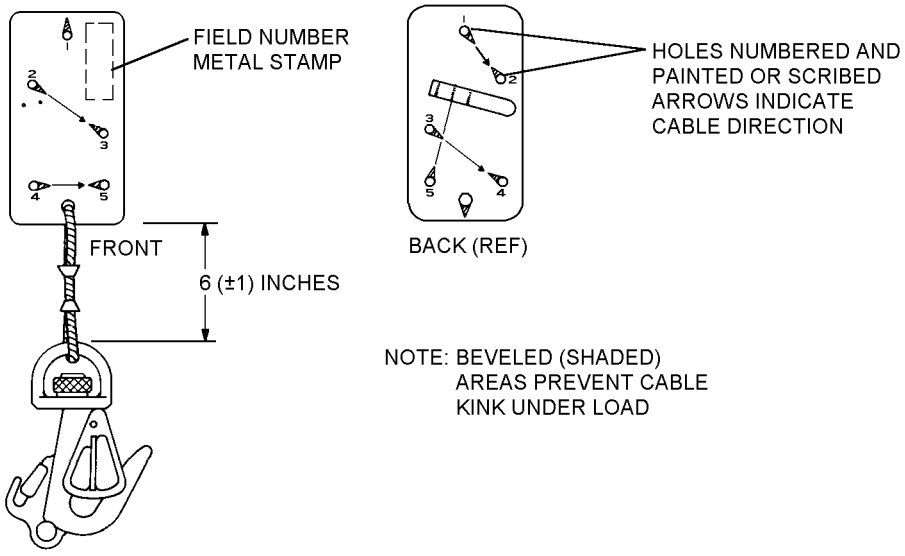

Figure 14-6. Hoist Quick Splice

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Use low-pressure air to remove foreign objects.

3. Remove contaminants using a mixture of water and detergent and a cloth.

4. Rinse thoroughly in clean water to remove soap and contaminants.

5. Dry with a clean cloth or low-pressure air.

6. Lubricate Rescue Hook bearing with lubricating oil and wipe excess using a cloth.

14-57. FABRICATION OF HOIST QUICK SPLICE.

To fabricate the Hoist Quick Splice, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Rescue Hook	MS18027-2A NIIN 00-863-8546
As Required	Cable, 3/16-inch, Type 1	NIIN 00-222-4492
	or	
	Cable, 7/32-inch, Type 1	NIIN 00-222-4478
2	Sleeve, Swaging (3/16-inch cable)	NIIN 00-132-9162

Materials Required (Cont)

Quantity	Description	Reference Number
2	Sleeve, Swaging (7/32-inch cable)	NIIN 00-431-5539
2	Thimble (3/16-inch cable)	AN100C6 NIIN 00-171-4912
2	Thimble (7/32-inch cable)	AN100C8 NIIN 00-262-1894
As Required	Aluminum Plate	6061T6
As Required	Stainless Steel, 1/32-inch	—
2	Rivets, Stainless Steel, 5/32-inch	—

NOTE

Refer to figure 14-7 for detailed manufacturing diagrams of Hoist Quick Splice.

1. Cut aluminum plate 6 5/8 inches by 3 inches.

2. Round corners of plate and remove sharp edges and burrs.

3. Drill holes and groove shaded areas with file to eliminate sharp edges and prevent cable kink.

4. Form the spring clip from the 1/32-inch stainless steel and attach to aluminum plate with two 5/32-inch rivets at a 15 degree angle.

5. Measure and cut a 12 inch piece of 3/8-inch cable.

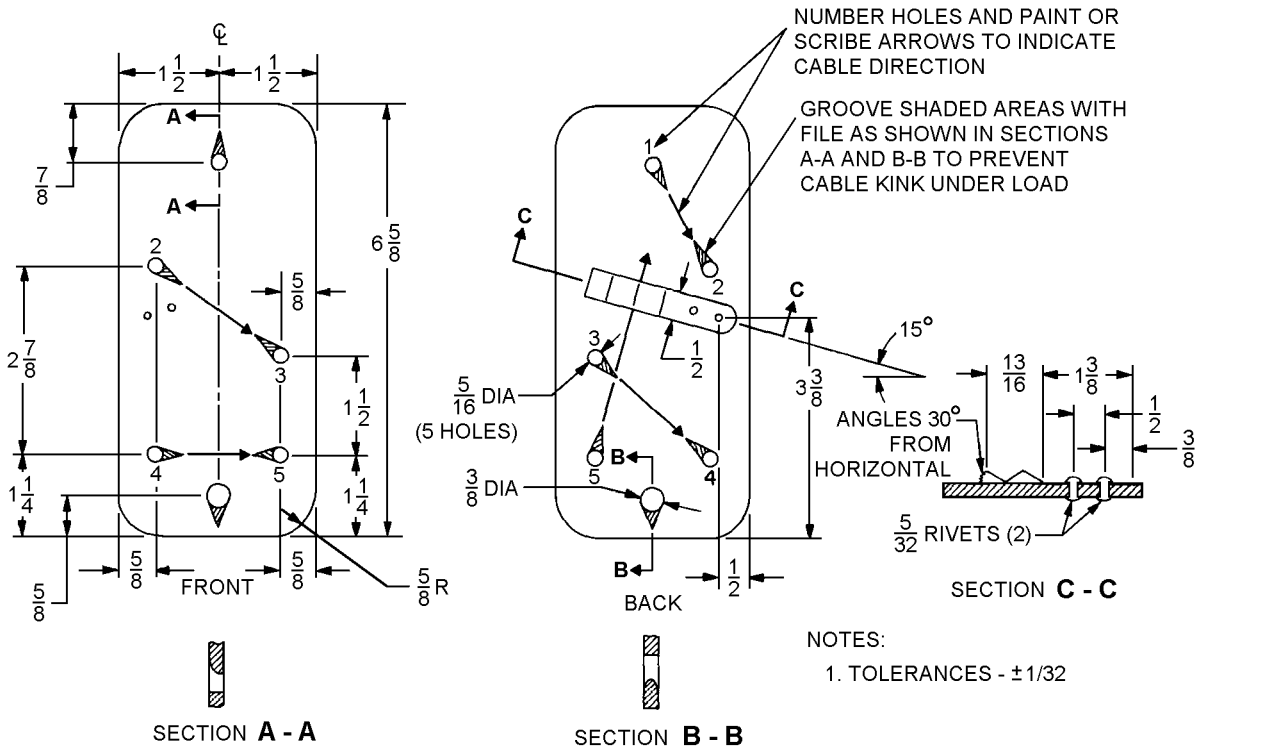

Figure 14-7. Fabrication of Hoist Quick Splice Plate

6. Attach one thimble to the 3/8-inch cable hole in Hoist Quick Splice Plate.

7. Thread cable through 3/8-inch hole around thimble and swage cable with swaging sleeve.

8. Attach the other thimble to the top swivel ring of the Double Rescue Hook.

9. Thread opposite end of cable through swivel ring around thimble and swage cable with swaging sleeve. Finished length of 3/8-inch cable shall be 6 plus or minus 1 inch from bottom edge of aluminum plate to top edge of swivel ring. Refer to Figure 14-7.

10. Perform a 10 minute load test with a load of 1000 lbs plus/minus 100 lbs.

11. Inspect cable and swaging sleeves for signs of damage.

12. Etch numbers on holes and paint or etch arrows to indicate cable direction.

13. Stamp or etch local field number on aluminum plate.

Section 14-3.4. Hoisting Sling Assembly

14-58. DESCRIPTION.

14-59. The Hoisting Sling Assembly (figure 14-8) is designed for quick attachment and detachment from the Stokes Litter and MEDEVAC Litter. It consists of two sets of stainless steel cables with each set having two cables measuring 33 and 41 inches. Each set of cables is joined together by a single stainless steel lifting ring and color-coded locking carabiners at the opposite end of cable. Color-coded locking carabiners coincide with the color coded attachment points of the Stokes Litter and MEDEVAC Litter.

14-60. MODIFICATION.

14-61. There are no modifications for the Hoisting Sling Assembly that are required or authorized.

14-62. MAINTENANCE.

14-63. INSPECTION. The Hoisting Sling Assembly shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

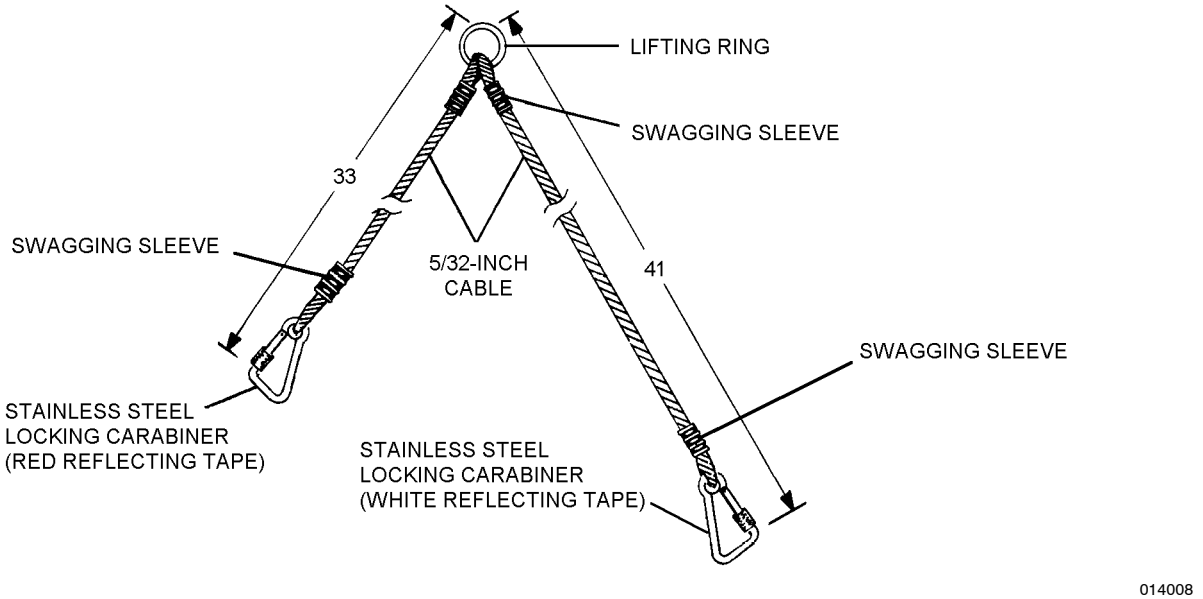

Figure 14-8. Hoisting Sling Assembly (One Set)

14-64. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-65, steps 1 thru 6.

14-65. Special Inspection. To perform the Special Inspection of the Hoisting Sling Assembly, proceed as follows:

1. Inspect cables for defects such as kinks and broken strands.

2. Inspect all hardware for corrosion and contaminants such as grease, dirt, fuels, etc.

3. Inspect locking carabiners for ease of operation and proper color coding. Red reflective tape shall be attached to the 33-inch cable carabiner and white reflective tape shall be attached to the 41-inch cable carabiner.

4. Inspect each swaging sleeve for one crimp, identified by a 1/2 inch wide compression.

5. Inspect lifting ring for wear, damage and deformity.

6. Inspect for mfg's tag with date of mfg.

7. Repair in accordance with paragraph 14-66.

14-66. REPAIR. Repairs are limited to the removal of corrosion, contaminants the replacement of color-coded reflective tape and replacement of mfg tag. All other discrepancies are cause for the replacement of the Hoisting Sling Assembly.

Materials Required

Quantity	Description	Reference Number
As Required	Tape, Red, Reflective	NIIN 00-949-7552
As Required	Tape, White, Reflective	NIIN 01-078-8660

1. Cut a 2-inch by 2-inch piece of reflective tape and attach it as identified in figure 14-8.

2. If mfg's tag is missing, review history card for date of mfg and tag Hoisting Sling.

3. Clean corrosion, and contaminants in accordance with paragraph 14-67.

14-67. CLEANING. To clean the Hoisting Sling Assembly, proceed as follows:

NOTE

Corrosion that cannot be removed shall render the item non-RFI and it shall be removed from service and replaced.

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Lubricating Oil, General Purpose	VV-L-800

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Use low-pressure air to remove foreign objects.

3. Remove contaminants using a mixture of water and detergent and a cloth.

4. Rinse thoroughly in clean water to remove soap and contaminants.

5. Dry with a clean cloth or low-pressure air.

6. Lightly lubricate locking carabiners gate sleeve threads and gate swivel pin with lubricating oil and wipe excess using a cloth.

14-68. LOAD TEST. (Conditional Only) Perform Load Test in accordance with paragraph 14-189, MEDEVAC Litter Load Test.

Section 14-3.5. Cable Cutter

14-69. DESCRIPTION.

14-70. The Cable Cutter (figure 14-9) is used to cut the hoist cable in the event of a malfunction. It may be used as a replacement to the Pneumatic Rescue Hand Tool.

14-71. MODIFICATION.

14-72. There are no modifications for the Cable Cutter that are required or authorized.

14-73. MAINTENANCE.

14-74. INSPECTION. The Cable Cutter shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-75. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-76, steps 1 thru 3.

14-76. Special Inspection. To perform the Special Inspection of the Cable Cutter, proceed as follows:

1. Inspect for ease of operation.

2. Inspect for corrosion and contaminants.

3. Inspect plastic/rubber handle grips for damage.

4. Repair in accordance with paragraph 14-77.

14-77. REPAIR. Repairs are limited to the removal of corrosion and contaminants and the lubrication of the hinge points. Refer to paragraph 14-78. All other discrepancies are cause for replacement of Cable Cutter.

14-78. CLEANING. To clean the Cable Cutter, proceed as follows:

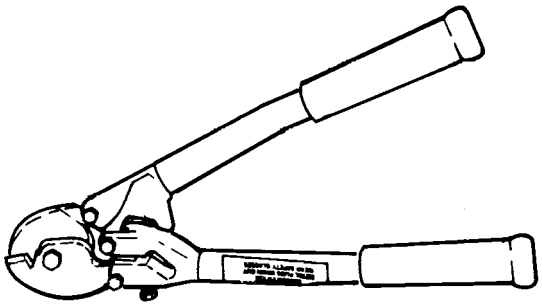

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Figure 14-9. Cable Cutter

NOTE

Corrosion that cannot be removed shall render the item non-RFI and it shall be removed from service and replaced.

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Lubricating Oil, General Purpose	VV-L-800

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Use low-pressure air to remove foreign objects.

3. Remove contaminants using a mixture of water and detergent and a cloth.

4. Rinse thoroughly in clean water to remove soap and contaminants.

5. Dry with a clean cloth or low-pressure air.

6. Lightly lubricate hinge points on cable cutter with lubricating oil and wipe excess using a cloth.

Section 14-3.6. Pneumatic Rescue Hand Tool

14-79. DESCRIPTION.

14-80. The Pneumatic Rescue Hand Tool (figure 14-10) is a cartridge operated cutting device. It is designed to cut stainless steel cable up to 7/32-inch, multiple strands of parachute suspension line as well as webbing with a thickness up to and including 1/4-inch and widths up to 1 3/4-inches in single cuts. A nylon carrying case houses two additional nitrogen cartridges.

NOTE

When the Pneumatic Rescue Hand Tool has failed the functional test, it shall be replaced with the Cable Cutter, Section 14-3.5. Future procurements of the Pneumatic Rescue Hand Tool are not authorized.

14-81. MODIFICATION.

14-82. There are no modifications for the Pneumatic Rescue Hand Tool that are required or authorized.

14-83. MAINTENANCE.

14-84. INSPECTION. The Pneumatic Rescue Hand Tool shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

WARNING

The Pneumatic Rescue Hand Tool is pressurized to 3,000 psi and may be hazardous if not vented before performing maintenance actions. Use caution when performing any maintenance to avoid injury.

14-85. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-86, steps 1 thru 3.

14-86. Special Inspection. To perform the Special Inspection of the Pneumatic Rescue Hand Tool, proceed as follows:

1. Remove pressure by squeezing the trigger and at the same time depressing the vent button under the spring-loaded cover. Remove expended cartridge by unscrewing knurled cap at base of handle.

2. Inspect for corrosion and contaminants such as dirt, oils, salt-water residue, etc.

3. Perform a functional test in accordance with paragraph 14-87.

4. Repair Pneumatic Rescue Hand Tool in accordance with paragraph 14-91.

14-87. FUNCTION TEST. The Function Test consists of a Leakage Test, Trigger Force Test, and Performance Test.

NOTE

Failure of the Functional Test shall render the Pneumatic Rescue Hand Tool non-RFI and it shall be removed from service and replaced with the Cable Cutter.

Materials Required

Quantity	Description	Reference Number
As Required	Scale (Push/Pull)	DPP-50 NIIN 00-473-0108

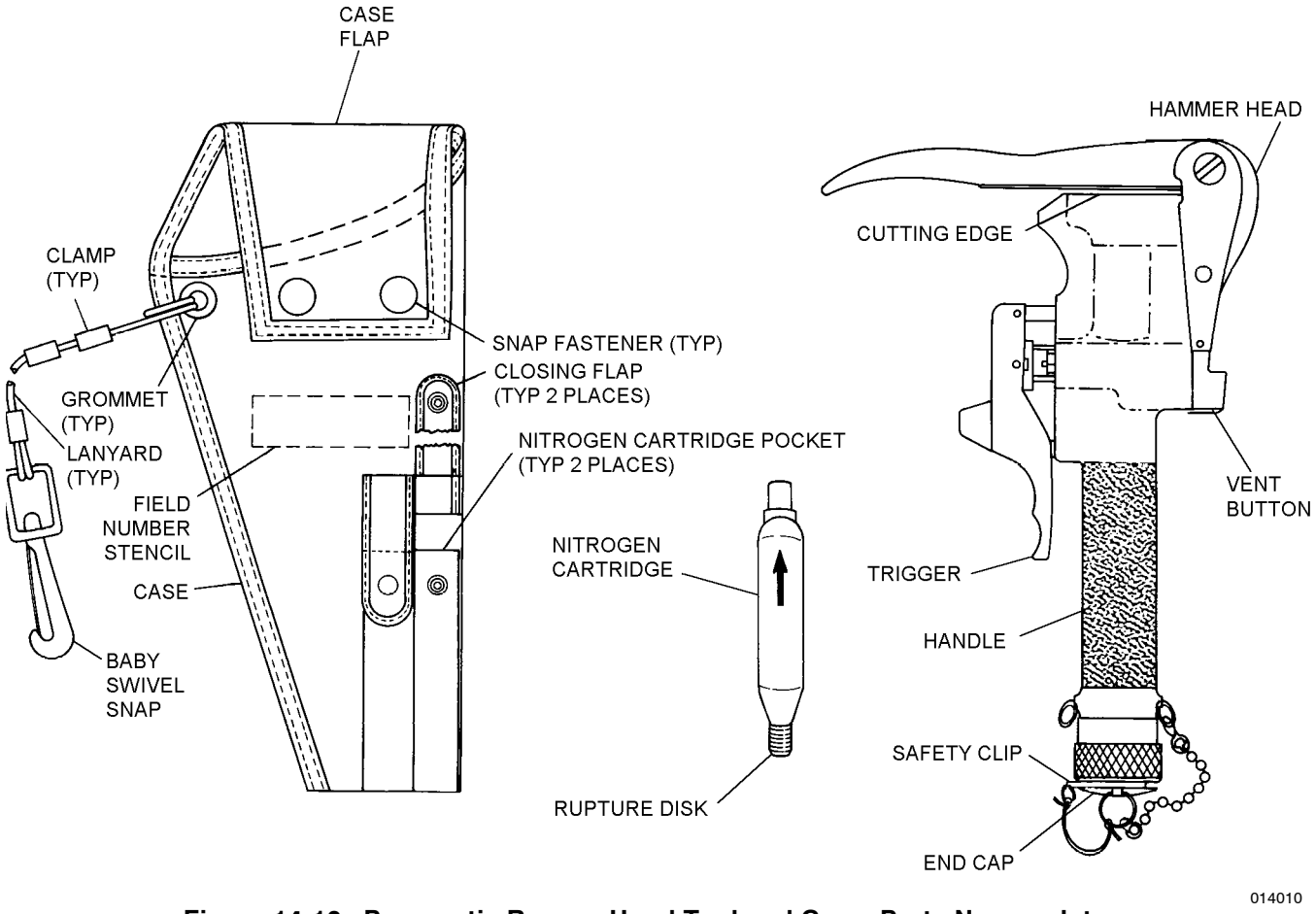


Figure 14-10. Pneumatic Rescue Hand Tool and Case, Parts Nomenclature

14-88. Leakage Test. To perform a Leakage Test, proceed as follows:

1. Pressurize the hand tool to 3,000 psi with a nitrogen cartridge.

2. Immerse the pressurized hand tool in fresh water, and rotate hand tool in three directions to eliminate any trapped air in external pockets.

3. Any leakage after 1 minute of immersion will indicate a defective seal.

14-89. Trigger Force Test. To perform a Trigger Force Test, proceed as follows:

1. Mount the pressurized hand tool in an appropriate fixture, cradle, or V-block.

2. Using a push-pull scale, measure the trigger force necessary to actuate the blade on the first stroke. The force shall be applied midway on the finger area of the trigger.

3. Two thicknesses of Type XIII webbing (MIL-W-4088C) should be cut. The trigger force shall be between 5 and 20 pounds. Trigger force outside this range indicates the need for repair of the trigger (forward) valve or the trigger assembly.

14-90. Performance Test. To conduct a Performance Test, proceed as follows:

NOTE

The Pneumatic Rescue Hand Tool is designed for approximately 10 cuts on a new 3000-psi nitrogen gas cartridge.

If the Performance Test is performed in conjunction with the Trigger Force Test and a new cartridge is not used, it is necessary to keep track of the total number of cuts expended by the original 3000-psi nitrogen cartridge.

1. Cut a second double thickness of webbing, and with the trigger in the depressed position, immerse the hand tool in water.

2. Any leakage after 1 minute of immersion indicates the piston seal leaks or the exhaust (rear) valve leaks.

3. Make ten additional double webbing cuts. After the tenth cut, with the trigger depressed, immerse the hand tool in water.

4. Check for leakage during 1 minute of immersion. Any leakage indicates the trigger (forward) valve is faulty.

5. Make additional cuts of double webbing until hand tool fails to cut through both thicknesses. The total number of cuts should exceed 10.

6. Failure to make 17 cuts without an apparent leak is an indication that the gas cartridge may not have been fully charged, the blade may need resharpening, the primary release system of the valve may be clogged (also indicated by high trigger force), the grease on the piston may have become gummy, and/or the anvil may be scored, allowing longer than normal piston travel. The hand tool is usable with reduced cutting capacity, but this indicates maintenance is required.

7. Perform maintenance procedures in accordance with paragraph 14-83.

8. If after maintenance and after completing at least two sets of functional tests in accordance with paragraph 14-87 the Pneumatic Rescue Hand Tool fails to provide at least 10 cuts with no leakage, the tool shall be considered unacceptable.

14-91. REPAIR. Repairs are limited to removal of corrosion, contaminants and lubrication. Refer to paragraph 14-92. For all other discrepancies, remove Pneumatic Rescue Hand Tool from service.

14-92. CLEANING. To clean the Pneumatic Rescue Hand Tool, proceed as follows:

NOTE

Corrosion that cannot be removed shall render the item non-RFI and it shall be removed from service.

Materials Required

Quantity	Description	Reference Number
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Pneumatic Grease	MIL-L-4343 or equivalent

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Use low-pressure air to remove foreign objects.

3. Remove contaminants using a mixture of water and low-pressure air.

4. Rinse thoroughly in clean water to remove contaminants.

5. Dry with a clean cloth or low-pressure air.

6. Lightly coat the cutting edge of blade with grease.

Section 14-3.7. Hoisting Gloves

14-93. DESCRIPTION.

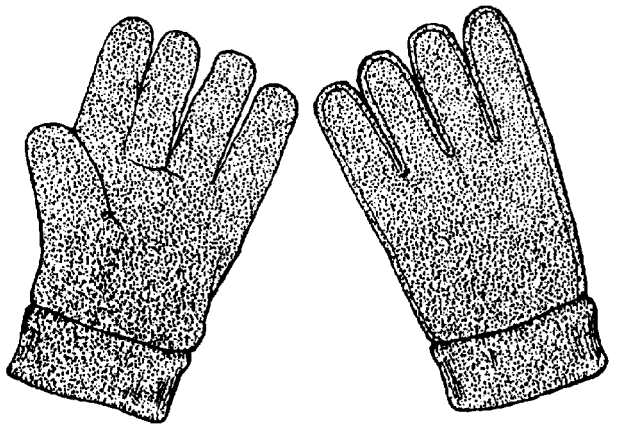
14-94. Hoisting Gloves (figure 14-11) are made of heavy leather and are worn by the aircrewmember during hoisting operations to protect hands from injury.

14-95. MODIFICATION.

14-96. There are no modifications for the Hoisting Gloves that are required or authorized.

14-97. MAINTENANCE.

14-98. INSPECTION. The Hoisting Gloves shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.



014011

Figure 14-11. Hoisting Gloves

14-99. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-100, steps 1 thru 3.

14-100. Special Inspection. To perform the Special Inspection of the Hoisting Gloves, proceed as follows:

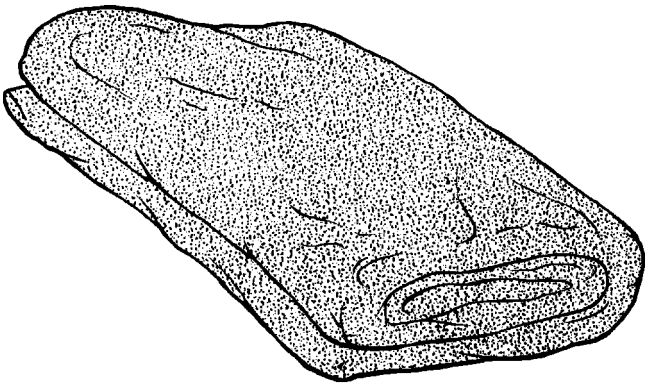
1. Inpsect for cuts, tears, fraying, and abrasions.
2. Inspect for dryness of leather.
3. Inspect for contaminants.
4. Repair in accordance with paragraph 14-101.

14-101. REPAIR. No repairs are authorized. Replace Hoisting Gloves as necessary.

Section 14-3.8. Wool Blanket

14-102. DESCRIPTION.

14-103. The Wool Blanket (figure 14-12) is approximately 5.5ft x 7ft shrink resistant and moth proof. The Wool Blanket is used for the treatment of hypothermia.



014012

Figure 14-12. Wool Blanket

14-104. MODIFICATION.

14-105. There are no modifications for the Wool Blanket that are required or authorized.

14-106. MAINTENANCE.

14-107. INSPECTION. The Wool Blanket shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-108. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-109, steps 1 and 2.

14-109. Special Inspection. To perform the Special Inspection of the Wool Blanket, proceed as follows:

1. Inspect blanket for rips, deterioration or fraying.
2. Inspect for contaminants.
3. Repair in accordance with paragraph 14-110.

14-110. REPAIR. Repairs are limited to cleaning. If contaminants cannot be removed by washing or dry-cleaning, replace Wool Blanket. For all other discrepancies, replace the Wool Blanket.

14-111. CLEANING.

NOTE

The Wool Blanket can be washed in a washing machine however; dry-cleaning is the optimum means of cleaning.

1. Washing machine instructions. Use only cool water to wash and rinse Wool blanket. Begin filling washing machine with cool water, add a mild laundry detergent, and ensure detergent is dissolved before placing blanket in washer.

2. Run washer for one full cycle. Remove blanket from washing machine and shake to remove wrinkles. Hang blanket to dry.

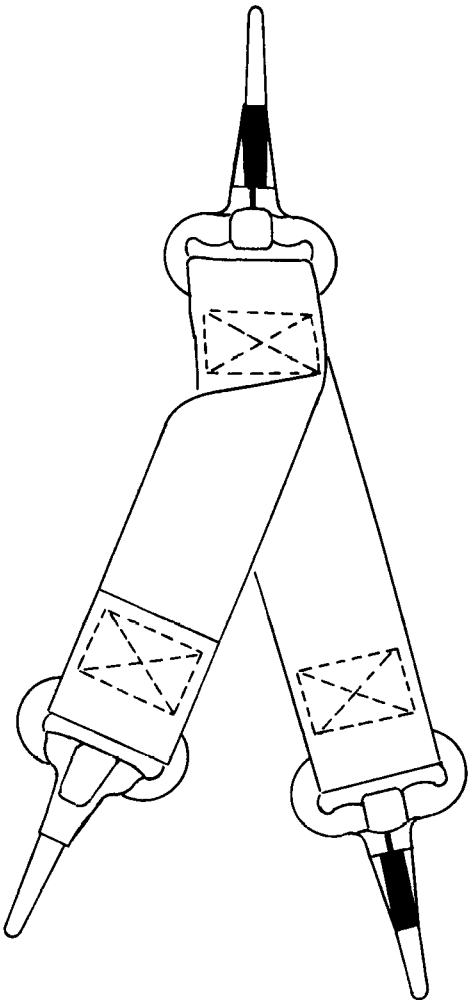
Section 14-3.9. Chemical Light Strap

14-112. DESCRIPTION.

14-113. The Chemical Light Strap (figure 14-13) is a lightweight double nylon strap with snaphooks used to attach chemical lights to rescue devices or hooks.

14-114. MODIFICATION.

14-115. There are no modifications for the Chemical Light Strap that are required or authorized.



014013

Figure 14-13. Chemical Light Strap

14-116. MAINTENANCE.

14-117. INSPECTION. The Chemical Light Strap shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-118. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-119, steps 1 thru 4.

14-119. Special Inspection. To perform the Special Inspection of the Chemical Light Strap, proceed as follows:

1. Inspect for broken or frayed stitching.

2. Inspect for damaged webbing.

3. Inspect for contaminants.

4. Inspect snaphooks for ease of operation, deformities and corrosion.

5. Repair in accordance with paragraph 14-120.

6. Manufacture Light Strap in accordance with paragraph 14-121.

14-120. REPAIR. Repairs are limited to re-stitching of broken stitches. For all other discrepancies, the Chemical Light Strap shall be replaced.

14-121. FABRICATION. To make the Chemical Light Strap, proceed as follows:

Materials Required

Quantity	Description	Reference Number
10 inches	Webbing, Nylon, Yellow, 1-inch	NIIN 00-844-2358
	or	
	Webbing, Nylon, Sage Green, 1-inch	NIIN 00-261-8579
3	Hook, Snap, 1-inch	M43770/1-CWBC3 NIIN 01-PAC-9758
As Required	Thread, Nylon, Size E	V-T-295 NIIN 00-204-3884

1. Cut and sear a 10-inch length of nylon webbing. Reeve webbing through snaphook to mid-point and crossboxstitch in place with size E nylon thread.

2. Reeve one end of webbing 1-inch through snaphook so opening of snaphook faces the free end of webbing. Crossboxstitch in place with size E nylon thread. Repeat with remaining end of webbing and snaphook. Ensure the openings of both snaphooks face each other (figure 14-14).

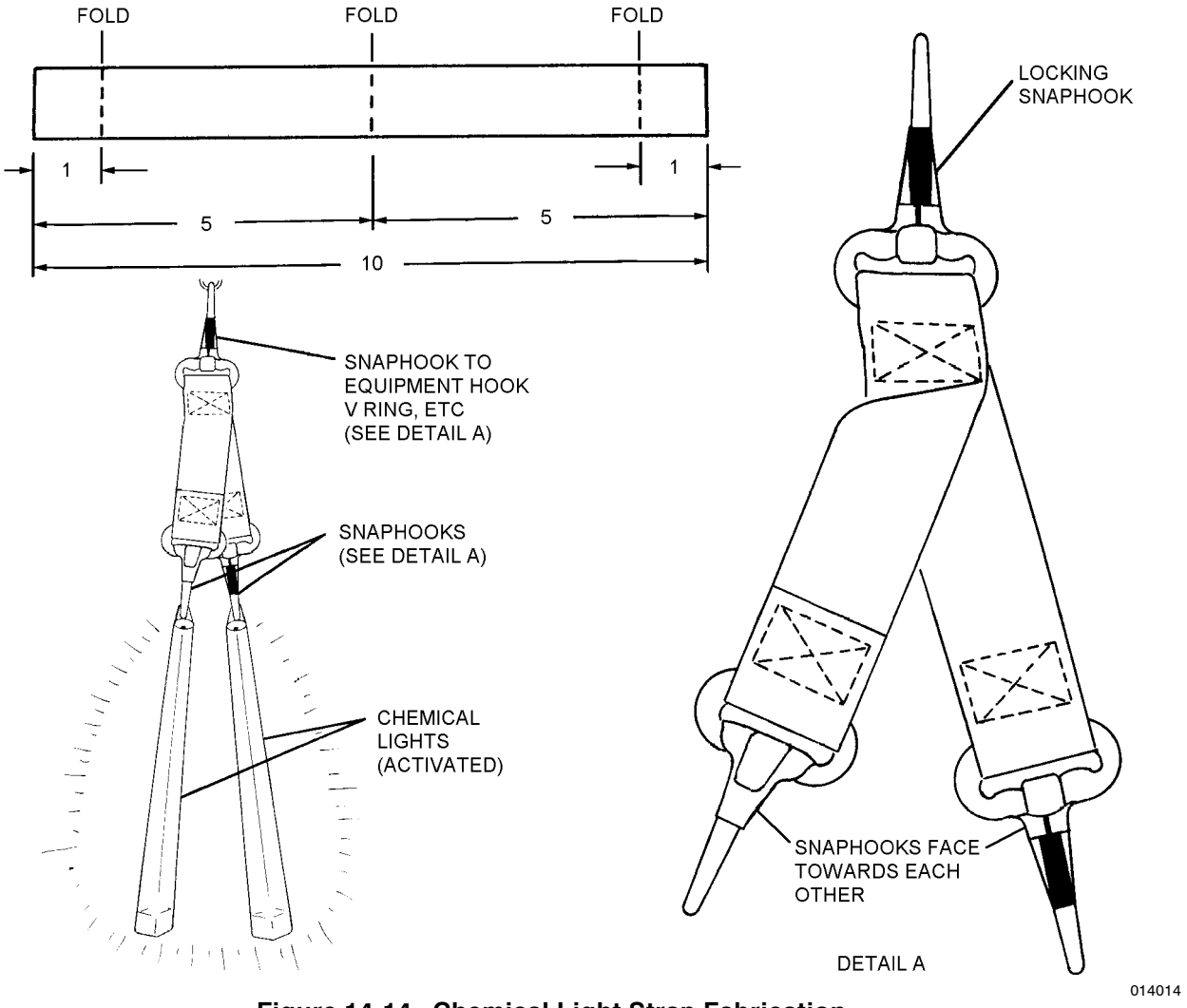


Figure 14-14. Chemical Light Strap Fabrication

Section 14-3.10. Crewmember's Aircraft Safety Belt

14-122. GENERAL.

14-123. Refer to Chapter 8 of this manual for inspection of Crewmember's Aircraft Safety Belt (figure 14-15).

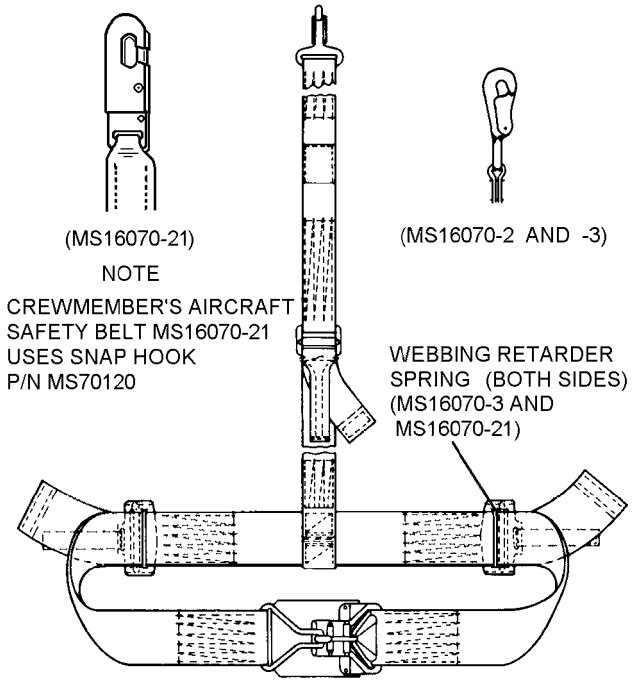


Figure 14-15. Crewmember's Aircraft Safety Belt (MS16070-2, MS16070-3, and MS16070-21)

Section 14-3.11. Chemical Lights

14-124. GENERAL.

14-125. Refer to Chapter 12 of this manual for inspection of Chemical Lights (figure 14-16).

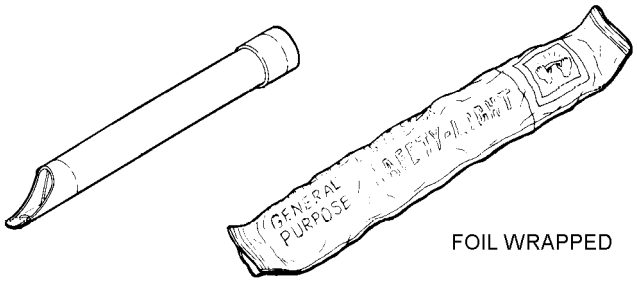


Figure 14-16. Chemical Light

Section 14-3.11.1 Electric Sea Marker Light, SDU-36/N

14-125.1 GENERAL.

NOTE

The Electric Sea Marker Light, (SDU-36/N), is no longer being manufactured. The Automatic Crew-Overboard Marker Light, section 14-3.11.2 is the replacement as authorized by SARMM.

All SDU-36/N's currently in service shall remain in service until no longer serviceable.

14-125.2 The Electric Sea Marker Light (figure 14-16A) is a droppable light which provides a visual reference to a survivor(s) position in the water. The light is omnidirectional and can be used where there is a possibility of fule contamination on the water surface. The light switch operates by an automatic gravity switch so that when upright (lens pointing up) the light is on, and when inverted the light is off.

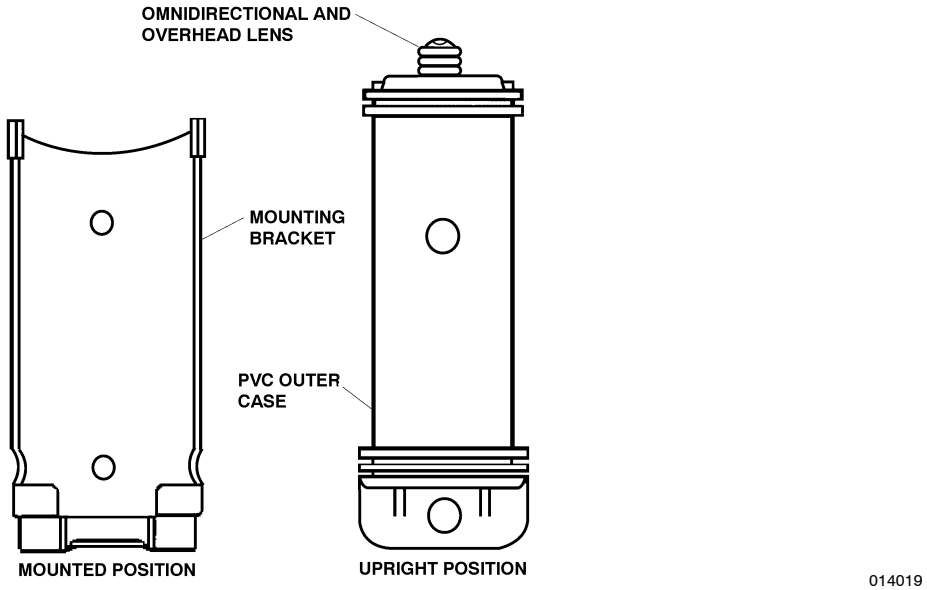


Figure 14-16A. Electric Sea Marker Light (SDU-36/N)

14-125.3 MAINTENANCE.

14-125.4 The SDU-36/N shall have a Place-In-Service inspection and Special inspection. Refer to table 14-1 for required inspection cycles.

NOTE

Inspection cycle of the SDU-36/N may be increased at the discretion of the squadron commander.

14-125.5 INSPECTION.

14-125.6 To perform the Special inspection of the SDU-36/N, proceed as follows:

1. Inspect for proper operation of light switch by turning light from the inverted position to the upright position. If light does not illuminate, replace battery and reinspect.

2. Inspect body of light for cracks and nicks.

3. Inspect battery compartment for corrosion, dirt and contamination.

4. Inspect O-rings for nicks, contamination or breakage.

5. Inspect light dome for tightness and security of attachment.

6. Ensure locking tabs are in the locked position.

7. Inspect light bracket for cracks, nicks and security of attachment.

8. Ensure light can be easily removed from bracket.

14-125.7 REPAIRS.

14-125.8 Repairs are limited to the removal of dirt and contamination and the replacement of the battery. All other discrepancies shall render the SDU-36/N non-RFI and it shall be replaced.

Section 14-3.11.2. Automatic Crew-Overboard Marker Light

14-125.9 DESCRIPTION.

14-125.10. The Automatic Crew-Overboard Marker Light is the replacement for the SDU-36/N, as authorized by SARMM. The Automatic Crew-Overboard Marker Light is a droppable strobe light which provides a visual reference to a survivor(s) position in the water. The light is omni-directional and can be used where there is a possibility of fuel contamination on the water surface. The light switch operates by an automatic gravity switch so that when upright (lens pointing up) the light is on, and when inverted the light is off. The Automatic Crew-Overboard Marker Light fits into the same bracket as the SDU-36/N.

14-125.11. MAINTENANCE.

14-125.12. The Automatic Crew-Overboard Marker Light shall have a Place-In-Service inspection and Special inspection. Refer to Table 14-1 for required inspection cycles.

14-125.13. PLACE-IN-SERVICE INSPECTION.

14-125.14. To perform the Place-In-Service inspection, proceed as follows:

NOTE

Discrepancies noted during the Place-In-Service inspection shall render the item non-RFI and shall be reported in accordance COMNAVAIRFORINST 4790.2 series.

1. Inspect light and bracket for damage. Inspect locking tabs for proper operation.

2. Check top cap O-ring for proper position and lightly lubricate with Christo-Lube, MCG-111.

3. Inspect outer O-ring for damage or breakage.

4. Ensure operating and maintenance instructions are legible.

5. Install battery with terminals towards open end of case (red wire to positive, black wire to negative).

6. Install top cap and secure locking tabs. Ensure they are properly seated in cap grooves.

7. Inspect for proper operation of light by turning light from the inverted position to the upright position. Light shall flash at a rate of 60 +/-10 flashes per minute. If light does not operate, check battery position and terminals or replace battery and reinspect.

8. Light is now ready for service.

14-125.15. Special Inspection.

14-125.16. To perform the Special inspection proceed as follows:

NOTE

Battery shall be replaced annually.

1. Inspect light and bracket for damage, locking tabs for proper operation and outer O-ring for damage or breakage.

2. Ensure operating and maintenance instructions are legible.

3. Remove top cap and inspect O-ring for proper position.

4. Remove battery and inspect battery compartment for corrosion, dirt and contamination.

5. Inspect light dome for tightness and security of attachment.

6. Re-install battery with terminals towards open end of case (red wire to positive, black wire to negative).

7. Lubricate top cap O-ring and install top cap and secure locking tabs. Ensure they are properly seated in cap grooves.

8. Inspect for proper operation of light by turning light from the inverted position to the upright position. Light shall flash at a rate of 60 +/-10 flashes per minute. If light does not operate, check battery position and terminals or replace battery and reinspect. If light fails to operate replace light.

9. Light is now ready for service.

14-125.17. REPAIRS.

14-125.18. Repairs are limited to the removal of dirt and contamination and the replacement of the battery. All other discrepancies shall render the Automatic Crew-Overboard Marker Light non-RFI and it shall be replaced.

Section 14-3.12. HGU-25 (Cranial)

14-126. GENERAL.

14-127. Refer to NAVAIR 13-1-6.7-3 for inspection of HGU-25 (figure 14-17).

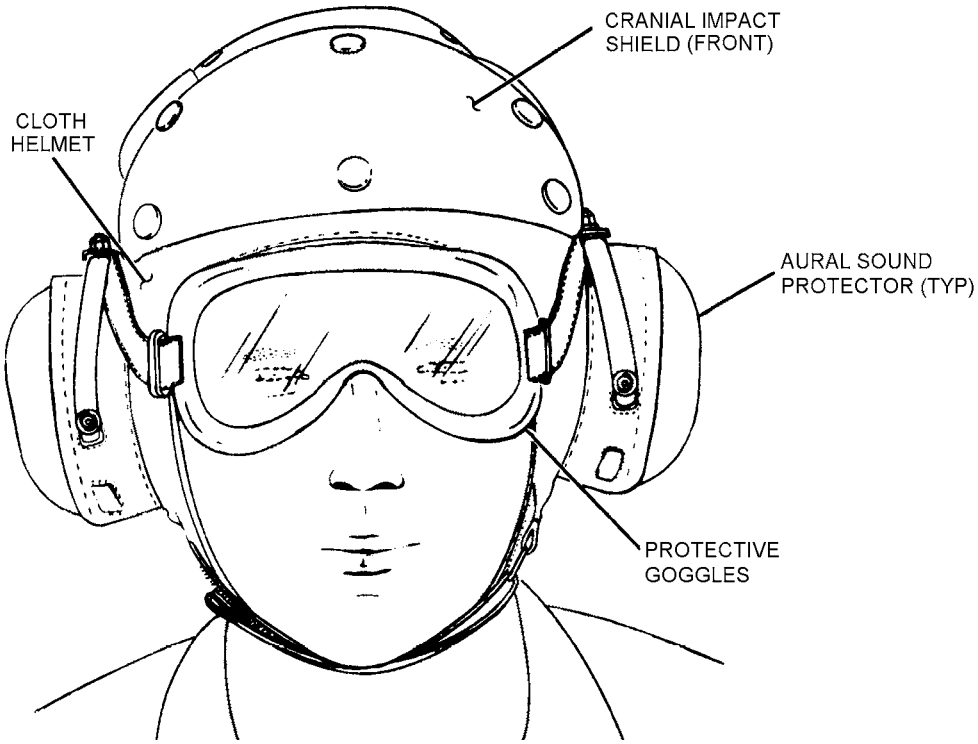


Figure 14-17. HGU-25 (Cranial)

Section 14-3.13. LPU-32/P or LPP-1/A Life Preserver Assembly

14-128. GENERAL.

14-129. Refer to NAVAIR 13-1-6.1-2 for inspection of LPU-32/P or LPP-1/A Life Preserver Assembly (figures 14-18 and 14-19).

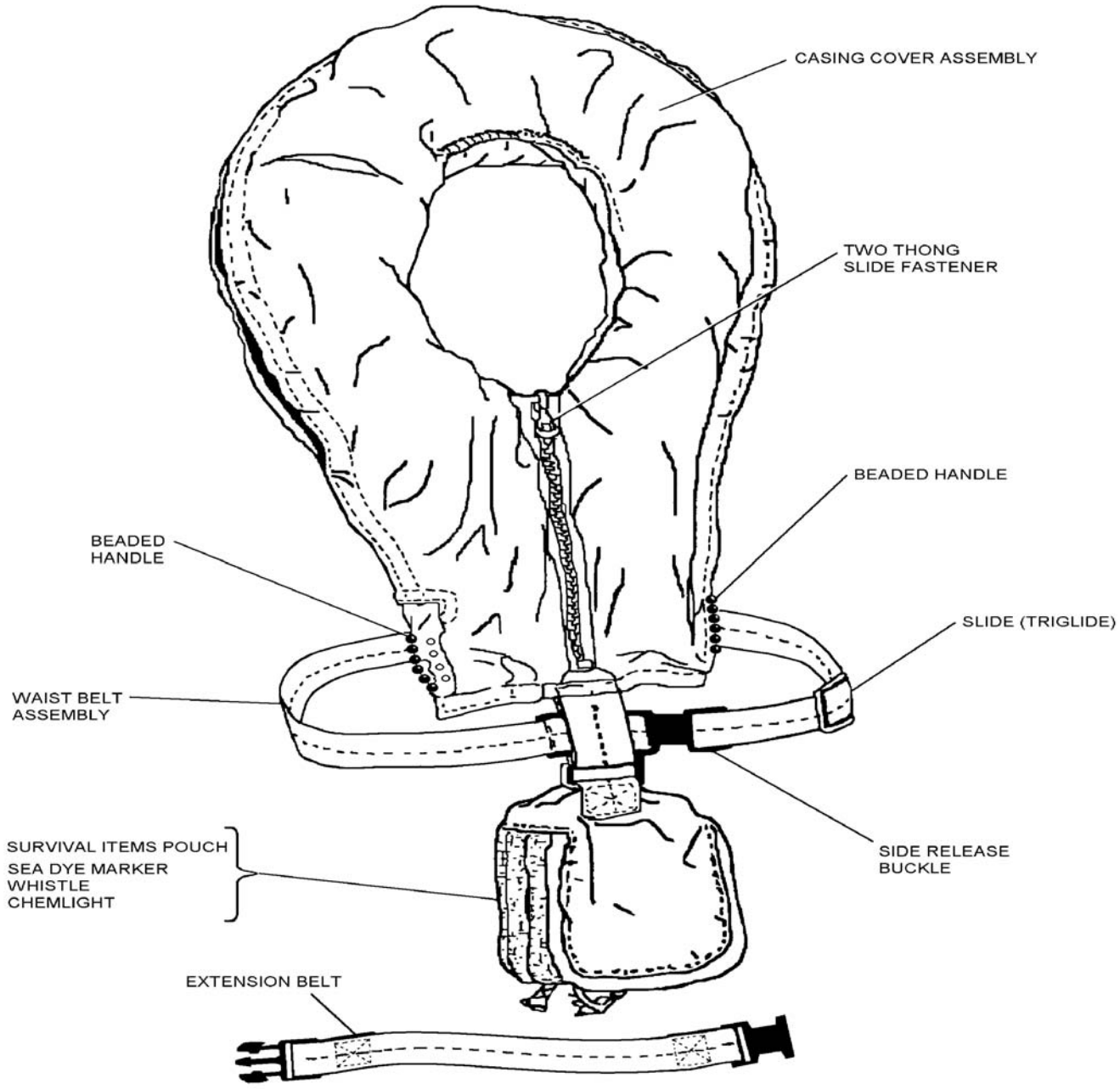


Figure 14-18. LPU-32/P Life Preserver Assembly, Parts Nomenclature

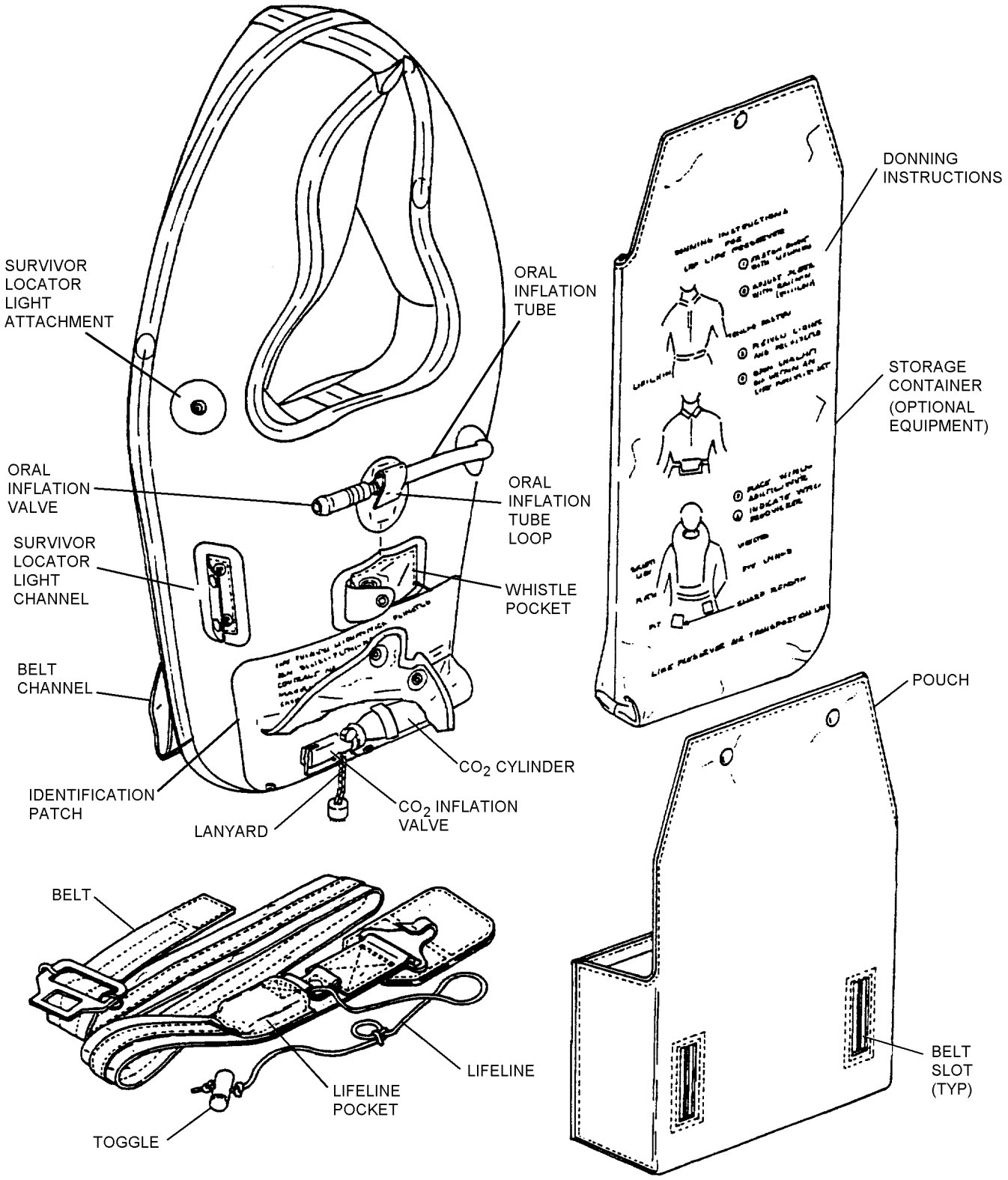


Figure 14-19. LPP-1 and -1A Life Preserver Assemblies

Section 14-4. Rescue Strop

14-130. DESCRIPTION.

14-131. The Rescue Strop (figure 14-20), also known as the “Horse Collar or Rescue Sling” is used to assist the SAR Crewman when performing a rescue overwater or overland. The Rescue Strop is constructed of an International Orange nylon casing, closed-cell foam, stainless steel hardware and a retaining strap. Instructions and diagrams for use are located on the casing.

14-132. MODIFICATION.

14-133. Rescue Strop P/N 216 shall be updated as listed in table 14-2.

14-134. MAINTENANCE.

14-135. INSPECTION. The Rescue Strop shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-136. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-137, steps 1 thru 5, 7 and 9.

14-137. Special Inspection. To perform the Special Inspection of the Rescue Strop, proceed as follows:

NOTE

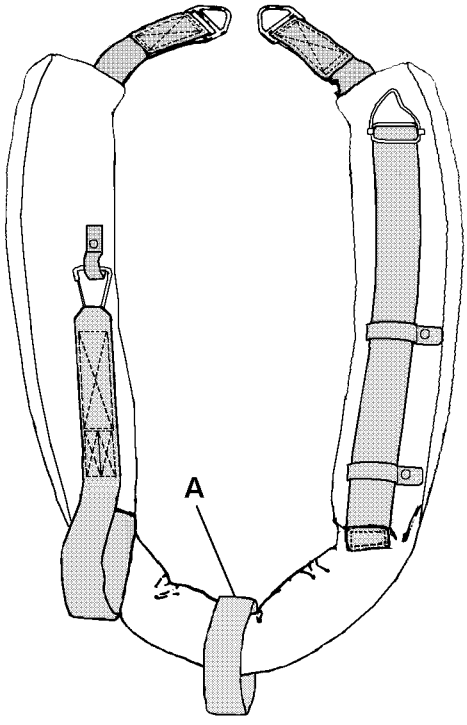
Fleet incorporation of ACC 605 changed the configuration of the assist handle. Life Saving Systems Corp. version of P/N 216-1 (modified rescue strop) the handle is manufactured as per figure 14-20, Ref A. Both are correct and both are identified as P/N 216-1.

1. Unsnap retaining straps and inspect for frayed, broken or missing stitches.

2. Inspect for wear or fraying of webbing straps and assist handle.

3. Inspect for rips, tears in fabric.

4. Inspect for contaminants.



ACC 605 CONFIGURATION

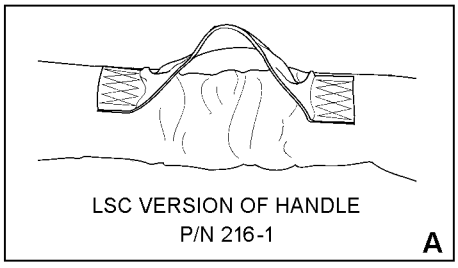


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Figure 14-20. Rescue Strop

Table 14-2. Rescue Strop Directives

Description of Modification	Application	Modification Code
Modification of arm retainer straps and assist handle	All Rescue Strops with P/N 216 only	ACC 605

5. Inspect hardware for security of attachment, corrosion, deformity, wear and, when applicable, ease of operation.

6. Repair as required in accordance with paragraph 14-138.

7. Inspect for proper marking. Refer paragraph 14-139.

8. Clean as required in accordance with paragraph 14-140.

9. Secure retaining straps.

a. Attach gated snaphook to webbing keeper and secure snap.

b. Adjust length of retainer strap with curved V-ring to fit in webbing keepers and secure snaps.

10. Perform Load Test (Conditional only) in accordance with paragraph 14-141.

14-138. REPAIR. Repairs are limited to the removal of corrosion and the replacement of broken stitches.

1. Repair of broken stitches on seam tape. No more than four stitching repairs.

2. Repairs of no more than three consecutive broken stitches on either "WW" stitch on hoisting webbing straps. No more than two repairs per "WW" stitch.

3. Lose or broken stitches on retainer strap ends. No more than three repairs.

4. Replace Rescue Strop as necessary.

14-139. MARKINGS. Verify markings on Rescue Strop to markings listed in table 14-3 and 14-4. Restore faded markings using a black permanent marker (NIIN 01-386-2212) or equivalent. Incorrect markings shall be marked out and the new information shall be stenciled or legibly written as close to the original location as possible.

14-140. CLEANING. To clean the Rescue Strop, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

Table 14-3. Modified Rescue Strop Markings (P/N 216-1 [ACC 605])

Marking	Location	Letter Height
Rescue Strop	Inboard Left side	1 inch
Sling, Survivors, Rescue	Outboard Left side	1/4 inch
NSN 1680-01-347-4946	Outboard Left side	1/4 inch
Contract # [if applicable]	Outboard Left side	1/4 inch (Note 1)
64249 MFG. P/N 216-1	Outboard Left side	1/4 inch
Date of MFG [month/year]	Outboard Left side	1/4 inch
All markings shall be stamped, stenciled or re-marked with permanent black ink. Letter heights are approximate. Words enclosed with brackets under the marking column shall not be stenciled; they are to be regarded as information or instructions only. SAR Aircrew procedures for using the Rescue Strop are addressed in the NTTP 3-50.1 Series manual. Notes: 1. Rescue strops not having a contract number assigned are authorized for use.		

Table 14-4. Rescue Strop Markings P/N 216-1 (LSC modified version)

Marking	Location	Letter Height
Rescue Strop	Outboard Left side	1 inch
Sling, Survivors, Rescue	Inboard Left side	1/4 inch
NSN 1680-01-347-4946	Inboard Left side	1/4 inch
Contract # [if applicable]	Inboard Left side	1/4 inch (Note 1)
Outboard Side	Outboard Right side	3/4 inch
Instructions [with arrows pointing inboard]	Right side top edge	3/4 inch
Lifesaving System Corp	Right side Inboard above diagrams	1/4 inch
P/N 216-1	Right side Inboard above diagrams	1/4 inch
Date of Mfg [month/year]	Right side Inboard above diagrams	1/4 inch
[5 Donning Instruction diagrams]	Right side Inboard	(Notes 2, 3)
[Warning with warning statement]	Right side Inboard below diagrams	1/4 inch

All markings shall be stamped, stenciled or re-marked with permanent black ink. Letter heights are approximate. Words enclosed with brackets under the marking column shall not be stenciled; they are to be regarded as information or instructions only.

Notes: 1. Rescue strops not having a contract number assigned are authorized for use.
2. SAR Aircrew procedures for using the rescue strop are addressed in the NTTP 3-50.1 Series Manual.
3. Missing or illegible drawings are cause for replacement of rescue strop.

2. Rinse Rescue Strop with clean fresh water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

14-141. LOAD TEST (Conditional only). Perform a load test as follows:

1. Ensure Rescue Strop is completely dry.

2. Repair any broken stitches as outlined in paragraph 14-138.

NOTE

If webbing machine is not available, proceed to step 4 and perform subsequent steps. Webbing Testing Machines are normally located in the Airframes shop.

3. For Load Test with Webbing Testing Machine:

a. Place Rescue Strop in Webbing Testing Machine according to manufacturer's directions for the webbing machine.

b. Apply a load of 500 pounds at a rate of one inch per minute.

c. When 500 pounds has been reached, inspect for signs of damage.

d. Release load and remove Rescue Strop from machine.

4. For Load Test without Webbing Testing Machine:

a. Suspend either end of Rescue Strop from a stationary object.

b. Gradually apply a weight of 500 pounds over a 2-minute period to the free end of the Rescue Strop by the addition of weights.

c. When 500 pounds has been reached, inspect for signs of damage.

NOTE

Rescue Strops that show signs of damage from Load Test shall be removed from service.

d. Release load and remove Rescue Strop from stationary object.

Section 14-5. Quick Strop

14-142. DESCRIPTION.

WARNING

Deleted.

14-143. The Quick Strop (figure 14-21) provides for a quick and safe means of hoisting uninjured personnel. It has stainless steel hardware, a slide buckle that slides down the strop to prevent the survivor from slipping out, and an adjustable retainer strap that is stored in a zippered pocket on the rear of the strop.

14-144. MODIFICATION.

14-145. There are no modifications for the Quick Strop that are required or authorized.

14-146. MAINTENANCE.

14-147. INSPECTION. The Quick Strop shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-148. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-149, steps 1 thru 5.

14-149. Special Inspection. To perform the Special Inspection of the Quick Strop, proceed as follows:

1. Inspect fabric and webbing for cuts, deterioration, abrasions, and contamination.

2. Inspect seams for proper adhesion and stitching.

3. Inspect retainer strap for security of attachment and wear. Stow retainer strap in pocket located on Quick Strop so that the snap hook is on top facing out the top of pocket. Secure velcro, snaps and zipper.

4. Inspect all hardware for corrosion, damage, wear, security of attachment and ease of operation.

5. Inspect for markings. Refer to table 14-5.

6. Repair in accordance with paragraph 14-150.

14-150. REPAIR. Repairs are limited to the removal of corrosion and cleaning. For all other discrepancies, the Quick Strop shall be replaced.

14-151. CLEANING. To clean the Quick Strop, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Quick Strop with clean fresh water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

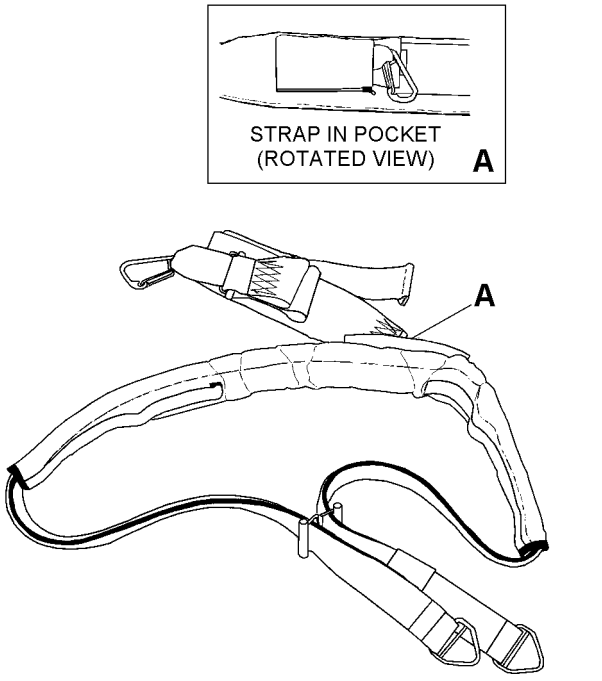

Figure 14-21. Quick Strop, P/N 214

Table 14-5. Quick Strop Markings (P/N 214)

Marking	Location	Letter Height
Quick Strop	Inside center back	5/16 inch
LifeSaving System Corp	Inside above diagrams	1/4 inch
P/N 214	Inside above diagrams	1/4 inch
Date of Mfg [month/year]	Inside above diagrams	1/4 inch
[5 Donning Diagrams]	Inside center back	1/4 inch (Note 1)
[Warning statement]	Inside center back	1/4 inch

All markings shall be stamped, stenciled or re-marked with permanent black ink. Letter heights are approximate. Words enclosed with brackets under the marking column shall not be stenciled; they are to be regarded as information or instructions only.

SAR Aircrew procedures for using the Rescue Strop are addressed in the NTTP 3-50.1 Series manual.

Notes: 1. Missing or illegible diagrams are cause for replacement of Quick Strop.

Section 14-6. Cable Weight Cover

14-152. DESCRIPTION.

14-153. The Cable Weight Cover (figure 14-22) is a bright yellow, foam rubber filled waterproof, buoyant cover. The cover surrounds the hoist cylinder metal weight to protect the aircrewman and/or survivor from serious injury if they are accidentally hit with the cable weight.

14-154. MODIFICATION.

14-155. There are no modifications for the Cable Weight Cover that are required or authorized.

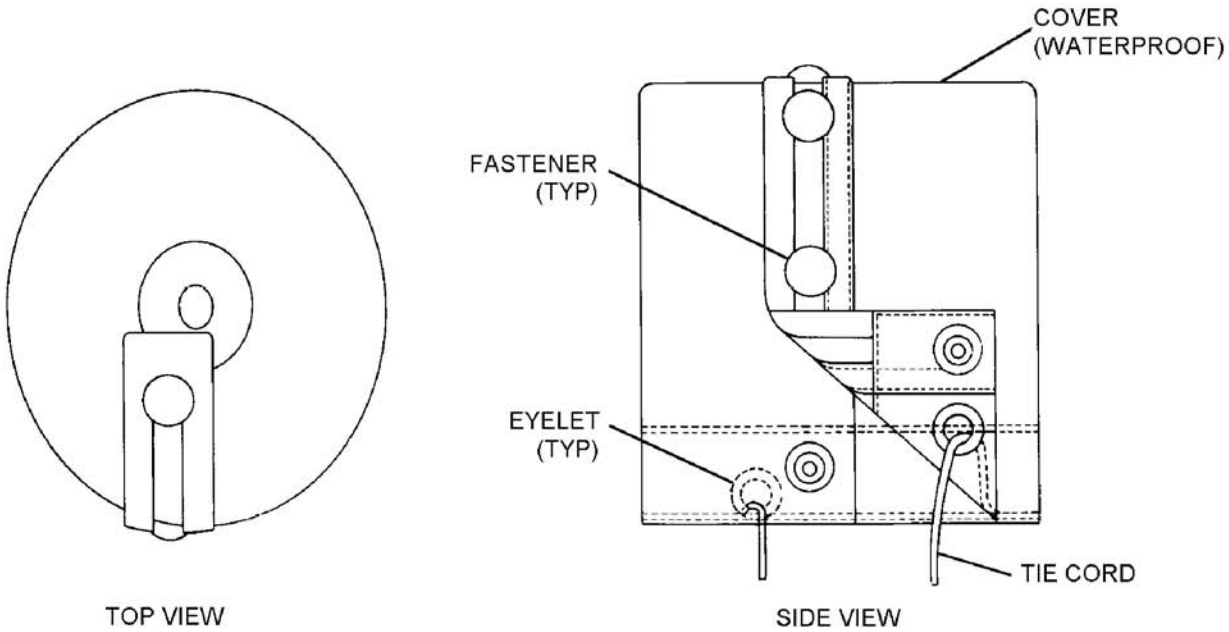

Figure 14-22. Cable Weight Cover, Parts Nomenclature

14-156. MAINTENANCE.

14-157. INSPECTION. The Cable Weight Cover shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-158. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-159, steps 1 thru 4 and 7.

14-159. Special Inspection. To perform the Special Inspection of the Cable Weight Cover, proceed as follows:

1. Inspect for frayed, broken or missing stitches.

2. Inspect for contaminants.

3. Inspect for rips and tears.

4. Inspect hardware for security of attachment and corrosion.

5. Repair in accordance with paragraph 14-160.

6. Clean in accordance with paragraph 14-161.

7. Inspect for proper markings, refer to paragraph 14-162.

14-160. REPAIR. Repair of the Cable Weight Cover shall consist of stitching of broken or fraying stitches, replacement of broken or corroded snap fasteners and replacement of faded markings. Unlimited repairs are authorized, however replace Cable Weight Cover when no longer practical to repair.

14-161. CLEANING. To clean the Cable Weight Cover, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

2. Rinse with fresh water to remove soap and contaminants.

3. Hang to dry.

14-162. MARKINGS. Verify markings on Cable Weight Cover to markings in table 14-6.

Table 14-6. Cable Weight Cover Markings

Marking	Location	Letter Height
COVER, CABLE WEIGHT, RESCUE EQUIPMENT STOCK NO. [1680-00-511-2714] PART NO. [MIL-R-8592-4] CONTRACT NO. [stencil applicable number] MANUFACTURER [stencil name of manufacturer] MFD DATE [stencil month and year of manufacture]	Top of cover	1/4 Inch
Notes: 1. All markings shall be stamped or stencilled with waterproof black ink. All words enclosed by brackets, in the column headed MARKING, shall not be stencilled on the equipment; they are to be regarded as instructions only.		

Section 14-7. Trail Line Assembly

14-163. DESCRIPTION.

14-164. The Trail Line Assembly (figure 14-23) is used to control and guide rescue equipment to and from the desired location during helicopter operations. It contains 120 ft of 3/8-inch polyethylene or polypropylene rope, a weak link, one 5 pound shot bag, “V” strap and trail line gloves.

14-165. MODIFICATION.

14-166. There are no modifications for the Trail Line Assembly that are required or authorized.

14-167. MAINTENANCE.

14-168. INSPECTION. The Trail Line Assembly shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-169. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-170, steps 1 thru 8 and 11.

14-170. Special Inspection. To perform the Special Inspection of the Trail Line Assembly, proceed as follows:

1. Inspect for required equipment, refer to Table 14-1.

2. Inspect for tears, cuts, holes and fraying of material.

3. Inspect for broken, missing or frayed stitching.

4. Inspect for contaminants.

5. Inspect all hardware for proper operation, corrosion and security of attachment.

6. Inspect hesitator loops for fraying and security of attachment.

7. Remove rope and inspect for broken strands, cracks and fraying.

8. Inspect Weak Link for correct tying and tacking.

NOTE

Weak Link on New Trail Line assemblies will have a zigzag stitch for tacking. This is acceptable. If zigzag stitching is loose or broken, replace Weak Link and tacking.

9. Repair in accordance with paragraph 14-171.

10. Clean in accordance with paragraph 14-172.

11. Pack in accordance with paragraph 14-173.

14-171. REPAIR. Repairs are limited to the removal of corrosion, stitching of broken stitches, cleaning, replacement of components and replacement of Weak Link. Unlimited sewing repairs are authorized on the Trail Line Pack however replace when no longer practical to repair. Damaged or contaminated Weak Link, rope or V-strap shall be replaced. Refer to paragraph 14-174 for Weak Link replacement.

14-172. CLEANING. To clean the Trail Line Assembly, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Trail Line Assembly with clean fresh water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

14-173. PACKING. Pack Trail Line Assembly as follows:

1. Stow rope in hesitator loops as shown in figure 14-23.

2. Stow V-strap into designated pocket.

3. Stow Line Handling Gloves into designated pocket.

4. Roll pack from bottom and secure.

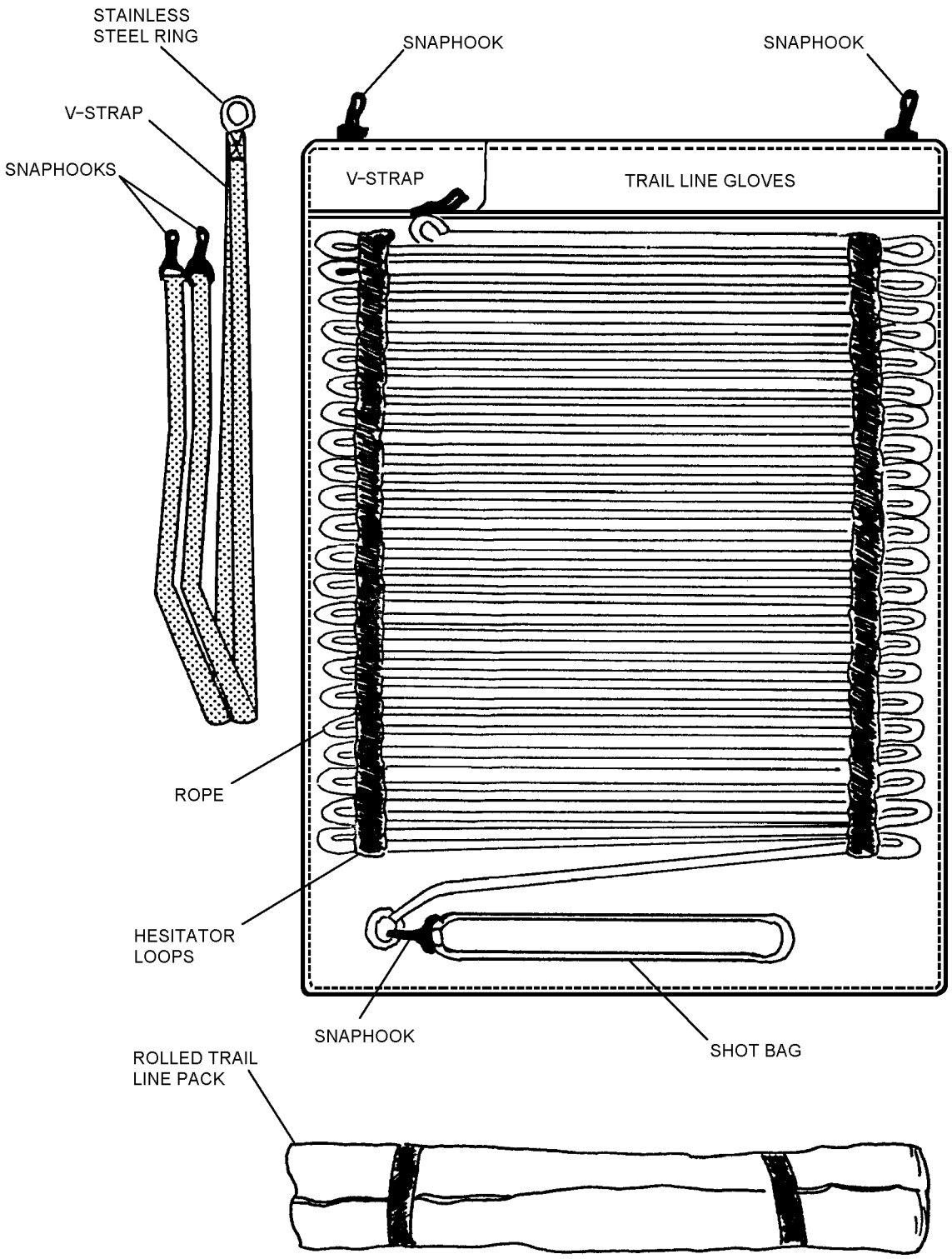

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Figure 14-23. Trail Line Assembly

14-174. WEAK LINK REPLACEMENT. Replace the Weak Link as follows:

Materials Required

Quantity	Description	Reference Number
8-1/2 inch	Cord, Nylon, Type III (natural)	MIL-C-5040 NIIN 00-240-2146
	or	
	Type III (red)	NIIN 00-240-2147
As Required	Thread, Nylon, Size FF, Type I,	V-T-295 NIIN 00-227-1244

1. Remove old weak link and discard.

2. Remove inner strands of the 8 1/2 inch Type III nylon cord. Sear ends.

3. Route the cord two turns through the ring and snap-hook, (figure 14-24). Tie ends with a binders knot leaving approximately 1-inch of free end.

4. Tack the free ends of the binders knot in two places with a single turn of waxed FF thread. Tack the binders knot at center of knot with a single turn of waxed FF thread. (figure 14-24). All tacking shall be tied using a surgeon's knot followed by a square knot.

14-175. WEAK LINK FABRICATION (Inland SAR Only). Fabricate the Weak Link as follows:

CAUTION

The fabrication of Weak Link is for use with Rappelling Ropes Only. Rappelling rope carabiner will be attached to the Weak Link. Do not attach carabiner directly to the V-strap ring.

Materials Required

Quantity	Description	Reference Number
1	V-Strap	P/N 223 NIIN 01-242-1031
10-inches	Cord, Nylon, Type III (Natural)	MIL-C-5040 NIIN 00-240-2146
	or	
	Type III (red)	NIIN 00-240-2147
As Required	Thread, Nylon, Size FF, Type I	V-T-295 NIIN 00-227-1244

1. Remove inner strands of a 10-inch length of nylon cord. Sear ends.

2. Route the cord through the V-strap ring and tie off ends with a binders knot forming a 2-inch loop and approximately 1-inch of free ends.

3. Tack the free ends of the binders knot in two places with a single turn of waxed FF thread. Tack the binders knot at center of knot with a single turn of waxed FF thread. (figure 14-24). All tacking shall be tied using a surgeon's knot followed by a square knot.

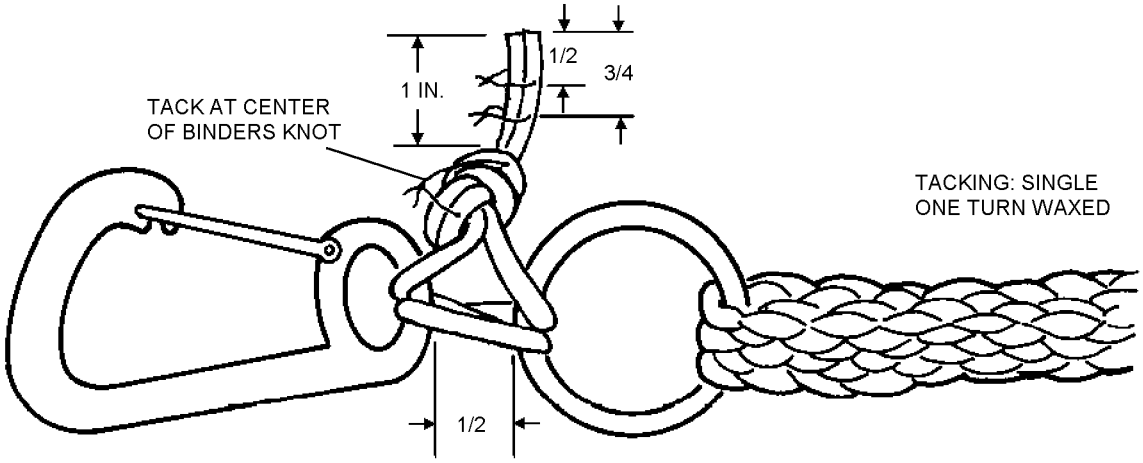

Figure 14-24. Weak Link Assembly

Section 14-7.1. 70-Foot Trail Line Assembly (For Training Only)

14-175.1 GENERAL.

14-175.2 The 70-Foot Trail Line Assembly is designed and manufactured the same as the 120-Foot Trail Line Assembly but uses a 70-foot line.

WARNING

The 70-Foot Trail Line Assembly shall be used for training only and shall be marked for training only.

14-175.3 MAINTENANCE.

14-175.4 All maintenance and inspections shall be conducted in accordance with table 14-1 and paragraph 14-167.

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Section 14-8. MEDEVAC Litter

14-176. DESCRIPTION.

14-177. The MEDEVAC Litter (figure 14-25) is designed for in water, shipboard, mountain, and other restricted area rescues. It is an alternative to the Stokes Litter. It has a low, narrow profile, flotation pads, two carrying harnesses, a carrying case and can be folded for easy transporting. It weighs approximately 40 pounds and measures 80 inches long and 16 1/2 inches wide.

14-178. MODIFICATION.

14-179. There are no modifications for the MEDEVAC Litter that are required or authorized.

14-181. INSPECTION. The MEDEVAC Litter shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-182. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-183, steps 1a-d, 2a-d, 3a-g, and 4a-e.

14-183. Special Inspection. To perform the Special Inspection of the MEDEVAC Litter, proceed as follows:

NOTE

All components of the MEDEVAC Litter shall be serialized with the serial number from the frame assembly. Re-serialize new components as necessary.

1. Frame assembly:

a. Inspect metal and welds for cracks, bends, corrosion.

b. Inspect bolts for security of attachment.

c. Inspect frame locking couplers for cracks, bends, corrosion, and ease of operation. Push in coupler locking pins and look inside cavity with flashlight to check for corrosion. Lubricate couplers in accordance with paragraph 14-185, step 6.

d. Inspect serial number tag for wear and readability.

e. Clean in accordance with paragraph 14-185.

f. Repair or replace in accordance with paragraph 14-184.

2. Litter mounted cables and Vertical hoisting sling:

a. Inspect swaging sleeves for corrosion on sides and ends.

NOTE

Kings Point Inc. slings/cables will have three crimps on swaging sleeves. LifeSaving Systems Corp. slings/cables may have three crimps on swaging sleeves or a single 1/2-inch crimp. Both are acceptable.

b. Inspect cables for corrosion, worn or broken wires at swag sleeves and along cable.

c. Inspect lifting rings for security, wear, damage and deformity.

d. Serialize vertical hoisting sling, with serial number from frame assembly.

e. Verify serial number during Special Inspection.

f. Repair or replace in accordance with paragraph 14-184.

3. Nylon frame cover, Flotation pads and all webbing restraint straps and pads:

a. Inspect for cuts, tears, broken or separated stitches, fraying and security of attachment.

b. Inspect for contaminants.

c. Inspect all adjustable fittings for cracks, corrosion and ease of operation.

d. Inspect slide fasteners for broken teeth and ease of operation.

e. Inspect for deterioration of flotation pads.

f. Inspect all webbing restraint straps for security of attachment, cuts, tears, broken stitches.

g. Inspect patient restraint straps for double stop tabs and proper location of straps, chest (gray/silver), waist (red), thigh (blue), and foot (green).

h. Clean in accordance with paragraph 14-185.

i. Repair or replace in accordance with para 14-184.

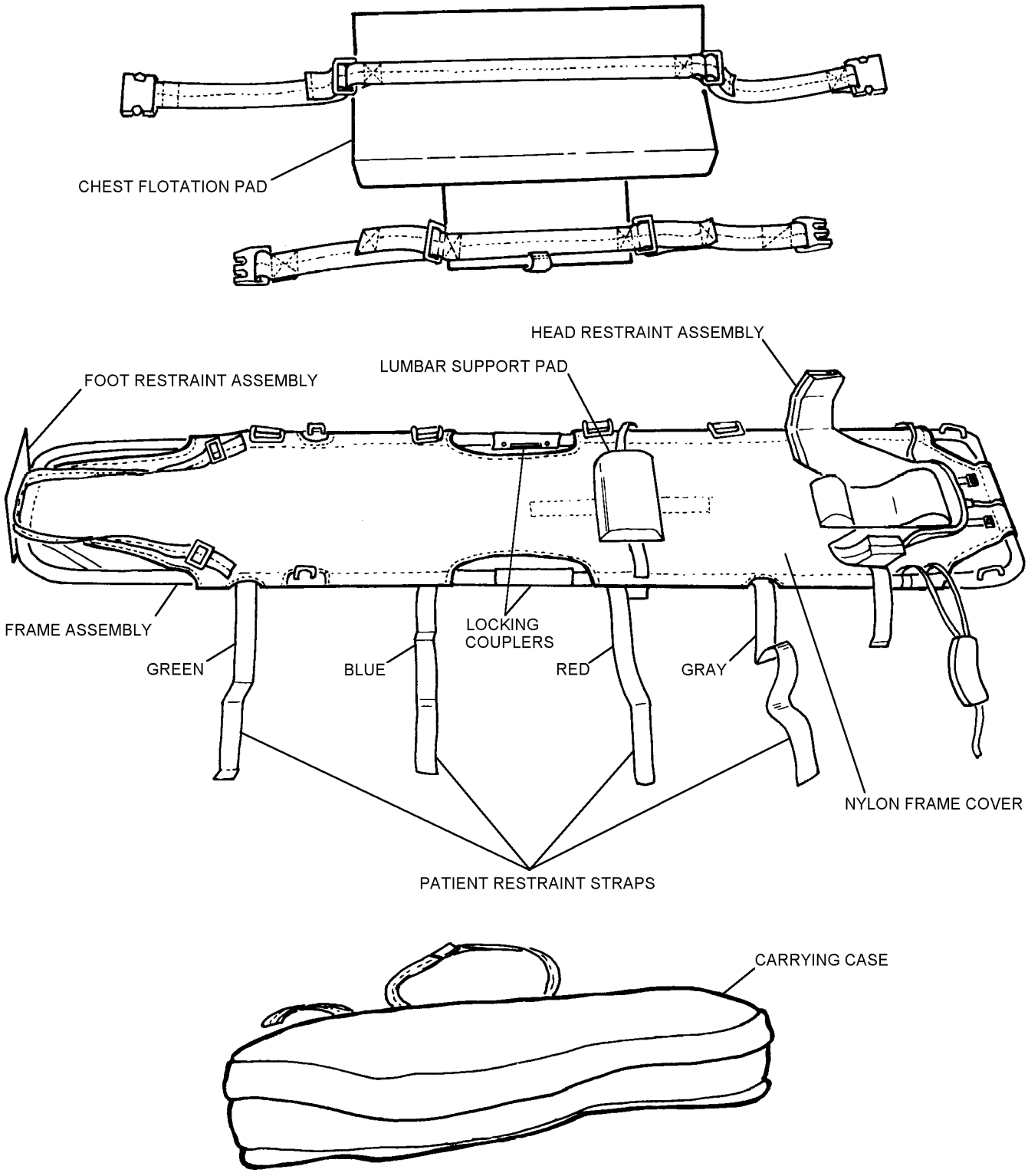

Figure 14-25. MEDEVAC Litter and Components

4. Inspect Carrying Case and adjustable harness (2 ea):

a. Inspect webbing for cuts, tears, broken or separated stitches, fraying and security of attachment.

b. Inspect adjustable fittings for cracks, corrosion and ease of operation.

c. Inspect for contaminants.

d. Inspect slide fastener for broken teeth and ease of operation.

e. Serialize carrying case and harness with serial number from frame assembly.

f. Verify serial numbers during Special Inspection.

g. Repair or replace in accordance with paragraph 14-184.

h. Clean in accordance with paragraph 14-185.

5. Perform a Load Test (Conditional Only) in accordance with paragraph 14-189.

14-184. REPAIR. To repair the MEDEVAC litter, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Thread, Nylon, Type II, Class A, Size E (Green or Neutral)	V-T-295 NIIN 00-616-0079
As Required	Cloth, Duck, Orange, Type I (or equivalent)	MIL-C-7219 NIIN 00-445-7825
As Required	Lubricating Oil	VV-L-800 NIIN 00-458-0075
As Required	Cloth, Cleaning	MIL-C-85043 NIIN 00-044-9281

1. Litter mounted cables and Vertical hoisting sling:

a. No repairs are authorized to the Vertical hoisting sling. Replace as necessary.

b. Litter-mounted cables shall be replaced by the manufacture.

NOTE

If the litter-mounted hoisting cables are damaged, either the frame must be replaced or the litter-mounted cables may be replaced by the manufacture. Shipping and manufacture repair costs shall be the responsibility of the command.

Lifesaving Systems Corp.
220 Elsberry Rd
Apollo Beach, FL 33572-228
813-645-2748

2. Frame Assembly:

a. If any cracks, bends, signs of severe or internal corrosion are evident on frame assembly or weld areas, replace frame assembly.

b. Remove surface corrosion in accordance with NAVAIR 01-1A-509.

c. Repairs are confined to the replacement of common nuts and bolts.

d. Lubricate couplings in accordance with paragraph 14-185, step 6.

3. Nylon Frame Cover, chest and bottom flotation assemblies and restraint straps:

a. Tears or fraying of components more than two inches requires replacement. Tears or fraying less than two inches can be patched. No more than three patches allowed on any one component.

b. No more than three stitching repairs allowed on either the frame cover or chest and bottom flotation assemblies.

c. Repairs to patient restraint straps are limited to two stitching repairs per strap. No more than two broken stitches are allowed per repair.

Replacement of patient restraint straps requires a complete cover replacement. Refer to paragraph 14-186 for replacement procedures for frame cover.

4. Carrying Case and adjustable harness:

a. Repair tears, fraying, broken stitches on carrying case. Unlimited repairs are authorized on carrying case. Replace case when no longer practical to repair.

b. No more than four stitching repairs allowed on harness assembly.

14-185. CLEANING. To clean the MEDEVAC Litter, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Silicone Lubricant	MIL-S-8660

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse MEDEVAC Litter with clean water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

CAUTION

When applying silicone lubricant to metal surfaces, avoid lubricant contact to nylon material. Re-clean as necessary.

6. Lubricate coupler pins with silicone after MEDEVAC Litter is completely dry. Push in coupler locking pins and apply silicone lubricant inside locking pin cavity. Wipe off excess with cloth.

14-186. FRAME COVER REPLACEMENT. Replace frame cover as follows:

NOTE

Refer to table 14-1 for ordering of frame cover.

14-187. Removal of Nylon Frame Cover.

1. Assemble MEDEVAC Litter.

2. Turn MEDEVAC Litter so that skid rails are facing up.

3. Remove bottom flotation pad.

4. Disconnect all nylon frame cover retaining straps.

5. Ensure all personnel retaining straps are disconnected and spread out.

6. Remove all cross connecter bracket retaining self locking nuts and bolts.

7. Disconnect and remove coupler then fold litter so nylon cover can be removed.

14-188. Installation of Nylon Frame Cover.

1. Fold litter frame assembly and position nylon frame cover on frame.

2. Unfold litter and install locking couplers.

3. Turn MEDEVAC Litter so that skid rails are facing up.

4. Install all cross connecter bracket retaining self locking nuts and bolts.

5. Connect all nylon frame cover retaining straps.

6. Install bottom flotation pad.

7. Fold and stow litter and accessories in carrying case.

14-189. LOAD TEST. (Conditional Only) To perform Load Test on the MEDEVAC Litter, Hoisting Sling and Vertical Hoisting Sling, proceed as follows:

14-190. MEDEVAC Litter and Hoisting Sling Load Test.

1. Ensure litter is completely dry.

2. Inspect litter in accordance with paragraph 14-183, steps 1 - 3.

3. Place a 500-pound load evenly distributed in the MEDEVAC Litter using sand bags or similar weight.

4. Attach hoisting sling assembly (P/N 1554AS201-1) to MEDEVAC Litter. Short ends (red) to head end of litter and long ends (white) to feet end of litter.

5. Suspend litter a few inches off deck for 30 minutes. While suspended, inspect litter and hoisting sling for signs of damage.

6. Lower litter onto deck and remove weight. Repair or replace litter or slings as necessary.

14-191. Vertical Hoisting Sling Load Test.

1. Remove lumbar support pad from back side of litter and attach 500-pounds to the first brace (head end), bolt to frame on back side of litter.

2. Suspend litter a few inches off deck for 30 minutes. While suspended, inspect litter and vertical hoisting sling for signs of damage.

3. Lower litter onto deck and remove weight. Repair or replace litter or vertical hoisting sling as necessary.

Section 14-9. Rescue Litter

14-192. DESCRIPTION.

14-193. The Rescue Litter (figure 14-26), also known as the Stokes Litter, is used to immobilize a survivor who has sustained back injuries. The Rescue Litter accommodates one survivor and can be used over land or over water. There are two styles of Rescue Litters authorized for use, rigid and foldable. A flotation assembly shall be installed onto the Rescue Litter for over water rescues. Refer to table 14-1 for procurement information.

14-194. MODIFICATION.

14-195. There are no modifications for the Rescue Litter that are required or authorized.

14-196. MAINTENANCE.

14-197. INSPECTION. The Rescue Litter shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-198. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-199, steps 1a-h, 2a-b, and 3a-d.

14-199. Special Inspection. To perform the Special Inspection of the Rescue Litter, proceed as follows:

1. Frame assembly:

a. Inspect metal frame and welds for cracks, bends, corrosion.

b. Inspect any bolts for security of attachment.

c. (Foldable Litter) Inspect frame locking couplers for cracks, bends, corrosion, and ease of operation. Push in coupler locking pins and look inside cavity with flashlight to check for corrosion. Lubricate couplers in accordance with paragraph 14-201, step 6.

d. Inspect all patient restraint straps for security of attachment, cuts, tears, broken stitches.

e. Inspect patient restraint straps for double stop tabs and proper location of straps, chest (gray/silver), waist (red), thigh (blue), and foot (green).

f. Inspect adjustable fittings for proper operation, cracks and corrosion.

g. Inspect for the presence of red and white reflective tape.

h. Inspect serial number tag for wear and readability.

i. Clean in accordance with paragraph 14-201.

j. Repair or replace in accordance with paragraph 14-200.

2. Plastic netting/metal basket:

a. Inspect for broken netting or wire.

b. Inspect for contaminants.

c. Repair or replace in accordance with paragraph 14-200.

d. Clean in accordance with paragraph 14-201.

3. Flotation Assembly:

a. Inspect covers and webbing for cuts, tears, broken or separated stitches, fraying and security of attachment.

b. Inspect for contaminants.

c. Inspect for deterioration of flotation pads.

d. Inspect all plastic FASTEX buckles for proper operation.

e. Repair or replace in accordance with paragraph 14-200.

f. Clean in accordance with paragraph 14-201.

14-200. REPAIR. Repair the Rescue Litter as follows:

1. Frame Assembly:

a. If any cracks, bends, signs of severe or internal corrosion are evident on frame assembly or weld areas, replace rescue litter.

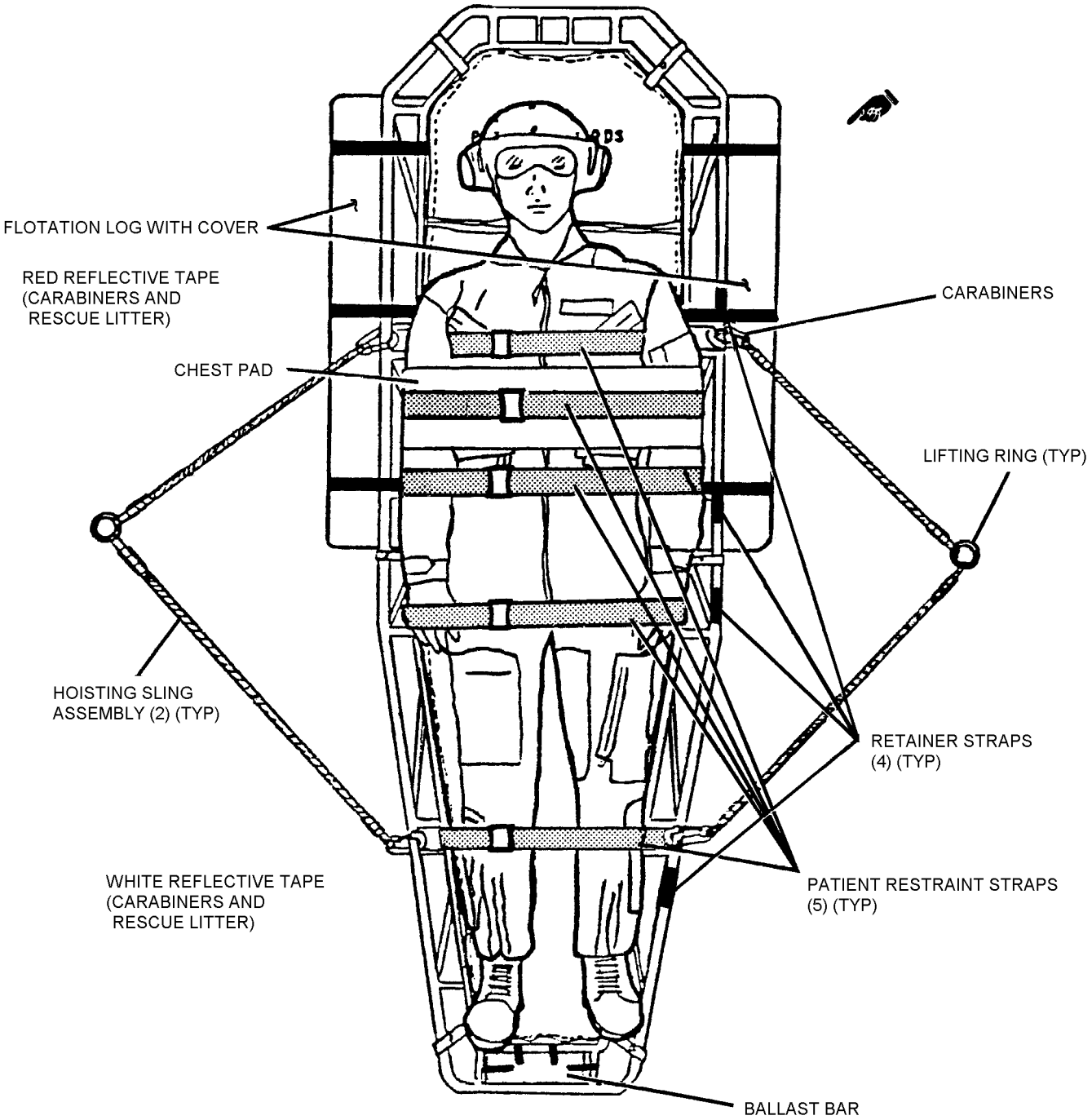

Figure 14-26. Rescue Litter Assembly

b. Remove surface corrosion in accordance with NAVAIR 01-1A-509.

c. Repairs are confined to the replacement of any common nuts and bolts.

d. Lubricate couplings in accordance with paragraph 14-201, step 6.

2. Deleted

3. Flotation Assembly:

a. Repairs are limited to the replacement of flotation components. Refer to table 14-1 for procurement of components.

14-201. CLEANING. To clean the Rescue Litter, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043
As Required	Silicone Lubricant	MIL-S-8660

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Rescue Litter with clean water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

CAUTION

When applying silicone lubricant to metal surfaces, avoid lubricant contact to nylon and webbing material. Re-clean as necessary.

6. Lubricate coupler pins with silicone after Rescue Litter is completely dry. Push in coupler locking pins and apply silicone lubricant inside locking pin cavity. Wipe off excess with cloth.

Section 14-10. Rescue Net

14-202. DESCRIPTION.

14-203. The Rescue Net (figure 14-27) is collapsible and buoyant designed to serve as a rescue device for one or two survivors. The addition of flotation ensure that it is safe for use in an open water environment. The Rescue Net may also be used to ferry or pick up cargo.

14-204. MODIFICATION.

14-205. There are no modifications for the Rescue Net that are required or authorized.

14-206. MAINTENANCE.

14-207. INSPECTION. The Rescue Net shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-208. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-209, steps 1 thru 5 and 8.

14-209. Special Inspection. To perform the Special Inspection of the Rescue Net, proceed as follows:

1. Erect net by unfolding lower frame assembly and forcing assembly down. Frame will snap open.

2. Suspend open section of net and slide sleeves of upper support ribs between swivel joints. Sleeves rest on support rib stops.

3. Inspect entire rescue net for signs of damage, corrosion and contamination.

4. Inspect net assembly for fraying or breakage.

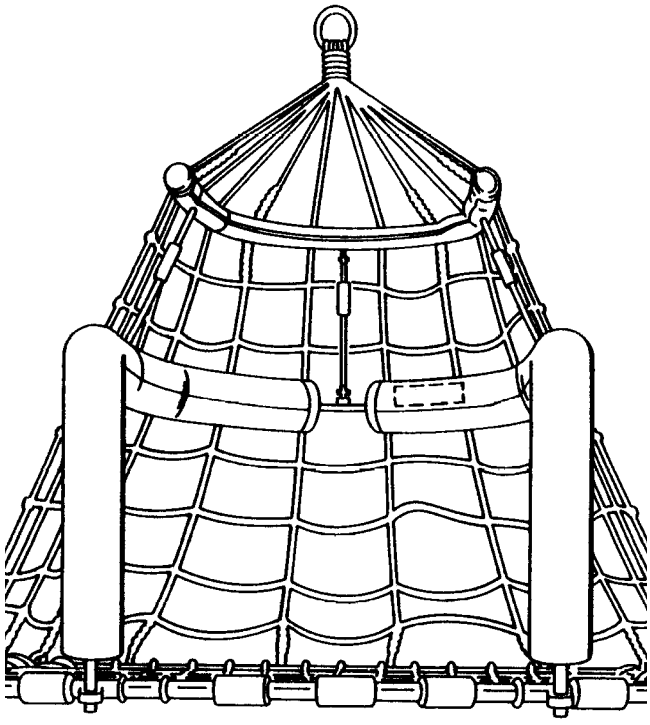

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Figure 14-27. Rescue Net

5. Inspect all hardware for security of attachment and ease of operation.

6. Repair Rescue Net in accordance with paragraph 14-210.

7. Clean Rescue Net in accordance with paragraph 14-211.

8. Pack Rescue Net in accordance with paragraph 14-212.

14-210. REPAIR. Repairs are limited to the replacement of components that can be procured and easily removed and replaced. Refer to figure 14-28 for component identification. Replace Rescue Net as necessary.

14-211. CLEANING. To clean the Rescue Net, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Rescue Net with clean water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Air dry.

14-212. PACKING. Pack the Rescue Net by sliding sleeves of upper support ribs up and away from swivel joints. Collapse upper section of net. Fold lower frame by applying upward pressure on snap joints. Fold net. Secure net in the folded position with elastic strap (NIIN 01-029-9084) or equivalent.

14-213. ILLUSTRATED PARTS BREAKDOWN.

14-214. The Illustrated Parts Breakdown lists and illustrates the assemblies and detail parts of the Rescue Net.

14-215. The Illustrated Parts Breakdown should be used when requisitioning and identifying parts.

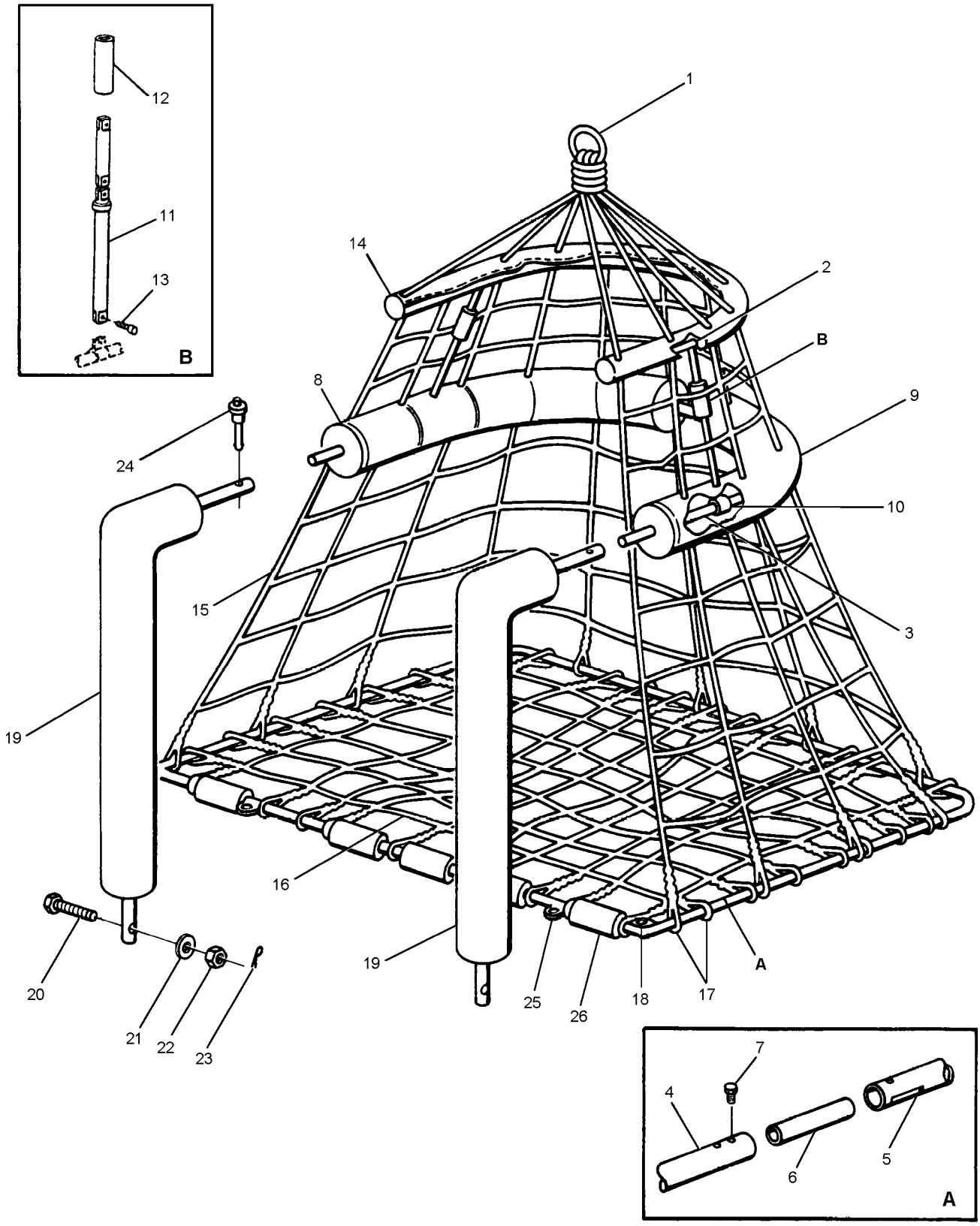

Figure 14-28. Rescue Net (68X874)

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
14-28	68X874	AIR SEA RESCUE NET (30416)	REF	
-1	68X874-1	. RING, Pickup	1	
-2	68X874-2	. U-RING, Top	1	
-3	68X874-3	. FRAME, Center	1	
	68X874-5	. D-RING ASSEMBLY, Bottom	1	
-4	68X874-6	. . D-TUBE, Front	1	
-5	68X874-7	. . D-TUBE, Rear	1	
-6	68X874-8	. . D-TUBE, Sleeve	2	
-7	68X874-21	. D-RING, Bolt	6	
	68X874-910	. FLOAT ASSEMBLY	1	
-8		. . FLOAT, Right	1	
-9		. . FLOAT, Left	1	
-10		. STUD, Stand-up	6	
	68X874-11	. ARM-SLEEVE ASSEMBLY	3	
-11	68X874-1617	. . ARM, Stand-up	3	
-12	68X874-16	. . SLEEVE, Stand-up	3	
-13	68X874-17	. . BOLT, Stand-up Stud	6	
-14	68X874-22	. PADDING-COVER ASSEMBLY	1	
-15	68X874-1314	. NET ASSEMBLY	1	
-16	68X874-12	. NET, Bottom	1	
-17	68X874-15	. SLEEVE, Guard	54	
-18		. BRACKET, Support Float	2	
-19		. SUPPORT FLOAT	2	
-20		. BOLT	2	
-21	AN3C-14	. WASHER	2	
-22	AN960C10	. NUT	2	
-23	MS17825-3	. COTTER KEY	2	
-24	MS24665-151	. PIN, Quick Release	2	
-25	MS17984-408	. V-RING	3	
-26	MS22020-1	. BUMPER	5	

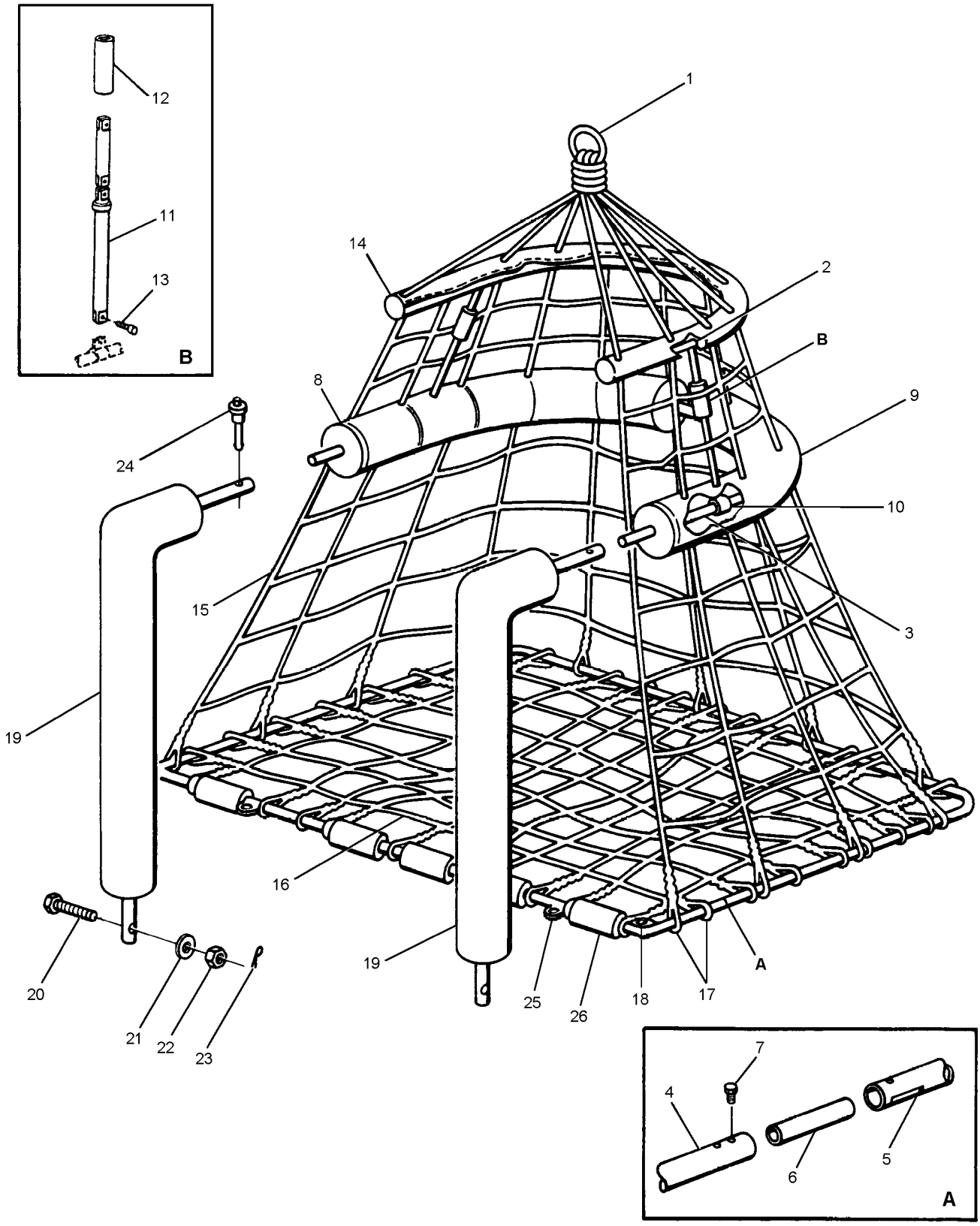

Figure 14-29. Rescue Net (X872SF)

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
14-29	X872SF	AIR SEA RESCUE NET (30416)	REF	
-1	X872-1	. RING, Pickup	1	
-2	X872-2	. U-RING, Top	1	
-3	X872-3	. FRAME, Center	1	
	X872-5	. D-RING ASSEMBLY, Bottom	1	
-4	X872-6	. . D-TUBE, Front	1	
-5	X872-7	. . D-TUBE, Rear	1	
-6	X872-8	. . D-TUBE, Sleeve	2	
-7	X872-21	. D-RING, Bolt	6	
	X872-910	. FLOAT ASSEMBLY	1	
-8		. . FLOAT, Right	1	
-9		. . FLOAT, Left	1	
-10		. STUD, Stand-up	6	
	X872-11	. ARM-SLEEVE ASSEMBLY	3	
-11	X872-1617	. . ARM, Stand-up	3	
-12	X872-16	. . SLEEVE, Stand-up	3	
-13	X872-17	. . BOLT, Stand-up Stud	6	
-14	X872-22	. PADDING-COVER ASSEMBLY	1	
-15	X872-1314	. NET ASSEMBLY	1	
-16	X872-12	. NET, Bottom	1	
-17	X872-15	. SLEEVE, Guard	54	
-18		. BRACKET, Support Float	2	
-19		. SUPPORT FLOAT	2	
-20		. BOLT	2	
-21	AN3C-14	. WASHER	2	
-22	AN960C10	. NUT	2	
-23	MS17825-3	. COTTER KEY	2	
-24	MS24665-151	. PIN, Quick Release	2	
-25	MS17984-408	. V-RING	3	
-26	MS22020-1	. BUMPER	5	

Section 14-11. Collapsible Rescue Basket P/N 495

14-215A. DESCRIPTION.

14-215B. The Collapsible Rescue Basket (Figures 14-29A through 14-29C is constructed primarily of welded type 304, electro-polished, stainless steel making it virtually maintenance free. The bail assembly, consisting of two halves, folds into the rescue basket, and each side collapses for compact stowage. The integrated tubular hinge design ensures safety and reduces maintenance. The sides of basket are constructed of 1/2" nylon webbing. The four side supports lock into the bottom frame when the basket is erected. The bottom is enclosed with a plastic, semi-rigid mesh liner with 1" openings. The basket possesses excellent floatation characteristics, is positively self-righting with 100% reserve buoyancy. Flotation covers are printed with safety pictorials and have high intensity retro-reflective markings. Rigged for use, the 495 Collapsible Rescue Basket is approximately 45" x 25" x 41" (l x w x h), and weighs 39 lbs maximum. Folded for storage, the unit is approximately 45" x 25" x 9 1/2" (l x w x h).

14-215C. MODIFICATION.

14-215D. There are no modifications for the Collapsible Rescue Basket that are required or authorized.

14-215E. APPLICATION.

14-215F. The Collapsible Rescue Basket is designed for use in the H-60 series aircraft as designated by SARMM and local authority.

14-215G. MAINTENANCE.

14-215H. Inspection. The Collapsible Rescue Basket is subject to a Place-in-Service inspection and Special inspection. Refer to Table 14-1 for required inspection cycles.

Figure 14-29A. Collapsible Rescue Basket (Open)

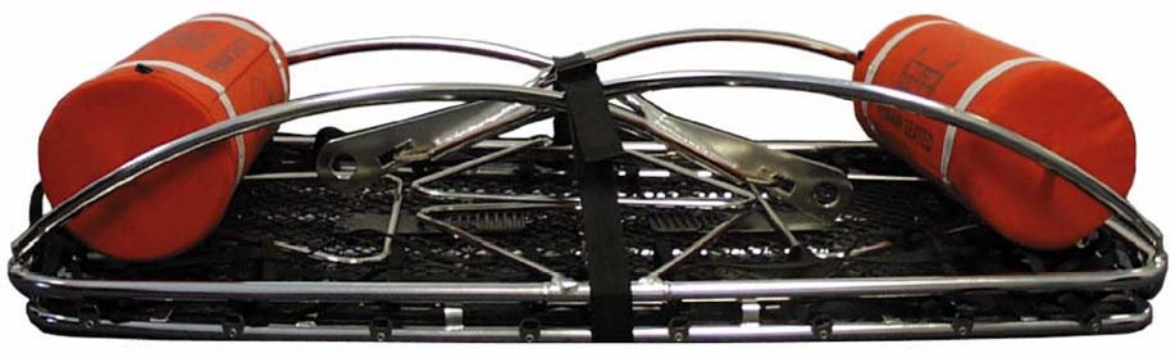

Figure 14-29B. Collapsible Rescue Basket (Folded)

Figure 14-29C. Collapsible Rescue Basket Case

NOTE

Any discrepancies noted during the Place-in-Service inspection shall be reported in accordance with COMNAVAIRFORINST 4790.2.

14-215I. **Place-In-Service Inspection**. The Place-in-service inspection shall be performed as follows:

1. Remove basket from stowage case. Remove stowage strap from basket. Inspect stowage case and strap for cuts, tears, abrasion and broken stitching.

2. Erect Basket. Raise the upper frame assembly on either end of the basket and engage the upper frame support into the latch on the lower frame. Repeat for opposite end. Latch the remaining two upper frame supports on the left and right side of the basket. Raise the two (2) bail assemblies and engage the bail retainer to hold bails in the up position.

3. Inspect the bail assemblies, upper frame, upper frame supports and lower frame assemblies for broken or cracked weld, bends (deformation), corrosion and severe abrasion.

4. Inspect float covers, floats, plastic mesh liner and liner guards for proper installation, cuts, tears, abrasion or any other visible damage.

5. Inspect basket side net for proper installation, cuts, tears, abrasion and broken stitching.

6. Stow basket. Disengage the bail retainer and open both bails fully. Release the upper frame support latches for the left and right sides of the basket and move supports toward the center of the basket. Next release upper frame support latch on one end of basket and move support toward center of basket. Release final upper frame support latch on the opposite end of the basket and move support toward center of basket. Gather side net webbing toward center of basket and close bail assemblies. Secure the basket by wrapping the stowage strap around the center of the basket, close buckle, and adjust strap for tight fit.

7. Verify Serial Number on case with basket. (Figure 14-29D) Insert basket into storage case and close.

8. Record inspection data on appropriate forms in accordance with COMNAVAIRFORINST 4790.2 series.

14-215J. **Special Inspection**. To perform the Special 180 day inspection follow procedures in paragraph 14-215H, steps 1-6, step 8 and the following:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D16791
As Required	Silicone Lubricant	MIL-S-8660
As Required	Cable Tie	MS3367-7-9 NIIN 00-570-9598

1. Re-stencil case if necessary.

2. Check for corrosion and remove as necessary.

3. Repair and clean in accordance with paragraph 14-215K.

14-215K. REPAIRS AND CLEANING.

14-215L. Repairs are limited to the replacement of the following parts:

Replacement parts:

#495-B Storage Bag and Strap
#495-01 Plastic Mesh Liner (w/cable ties)
#495-02 Side Net Replacement Kit
#495-10 Bail Retainer
#495-11 Liner Guard
#499-2 Floats w/covers
#499-3 Floats Covers, pr

Notes: 1. Replacement parts are available open purchase from:

Life Saving Systems Corp.
220 Elsberry Rd.
Apollo Beach, FL 33572-2289
1-813-645-2748
www.lifesavingsystems.com

1. Basket side net replacement (P/N 495-02): Drill heads off of rivets with proper size drill. Punch rivets inside of tube members. Align new basket side net seam in center of one end on bottom frame and insert rivets and secure rivets with proper tool. Place top frame assembly onto bottom frame and carefully align the upper part of the basket side net. Insert rivets and secure rivets with proper tool. Check for proper basket operation.

2. Basket mesh liner replacement (P/N 495-01): Remove liner and liner guard by cutting the plastic cable ties. Align liner and secure with cable ties. Cut off excess length of ties squarely. Align liner guards and secure with new cable ties. Cut off excess length of ties squarely.

3. Broken cable ties can be replaced as necessary.

14-215M. **Cleaning.**

1. After use or as required, thoroughly wash the entire basket with fresh water and mild detergent. Rinse with clean fresh water. Lubricate all hinge points with lubricant.

Manufacturer's Information and Part Number Location

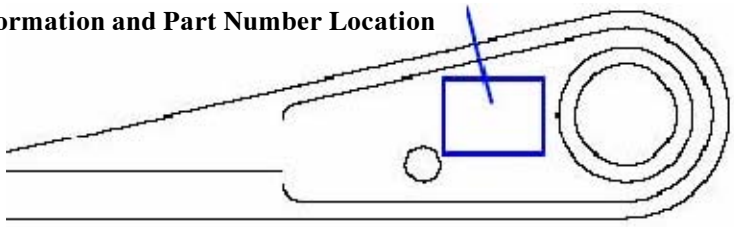

Figure 14-29D. Bail Eye

Section 14-12. Forest Penetrator and Rescue Seat

14-216. DESCRIPTION.

14-217. The Forest Penetrator (figure 14-30) and Rescue Seat (figure 14-31) are used to assist rescue personnel for both over land and over water rescue operations. The Forest Penetrator accommodates one to three survivors and the Rescue Seat accommodates one or two survivors. Each seat contains safety straps to secure personnel to the seat and a flotation collar (figure 14-32) to prevent the seat from sinking in over water rescues. The Rescue Seat will replace the Forest Penetrator by attrition.

14-218. MODIFICATION.

14-219. There are no modifications for the Forest Penetrator or Rescue Seat that are required or authorized.

14-220. MAINTENANCE.

14-221. INSPECTION. The Forest Penetrator and Rescue Seat shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-222. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-223, steps 1a-f and i, 2a-c, and 3a-d.

14-223. Special Inspection. To perform the Special Inspection of the Forest Penetrator and Rescue Seat, proceed as follows:

1. Forest Penetrator.

a. Remove the flotation collar if attached and inspect in accordance with step 3.

b. Inspect fabric and webbing for cuts, tears, deterioration, abrasion, stains, and dirt.

c. Inspect all seams for broken stitches.

d. Inspect safety straps for security of attachment. Install straps in nylon case by faking straps and ensuring yellow tabs marked PULL OUT are accessible and visible. Secure fastener tape.

e. Check seat locking and retraction mechanisms for ease of operation.

f. Inspect all hardware and slide fasteners for security of attachment, corrosion, damage, wear, cracks, sharp nicks, and burrs.

g. Repair or replace in accordance with paragraph 14-224.

h. Clean in accordance with paragraph 14-227.

i. Inspect markings in accordance with paragraph 14-228.

2. Rescue Seat. Inspect Rescue Seat in accordance with step 1b thru 1i and the following:

a. Inspect end plug for proper installation and security of attachment. End plug should be installed so that the seat remains level and stable when in a vertical position on the ground.

b. Stow safety strap.

c. Perform Tension (Push/Pull) test in accordance with paragraph 14-225.

d. Perform Load Test (conditional and repair only) in accordance with paragraph 14-226.

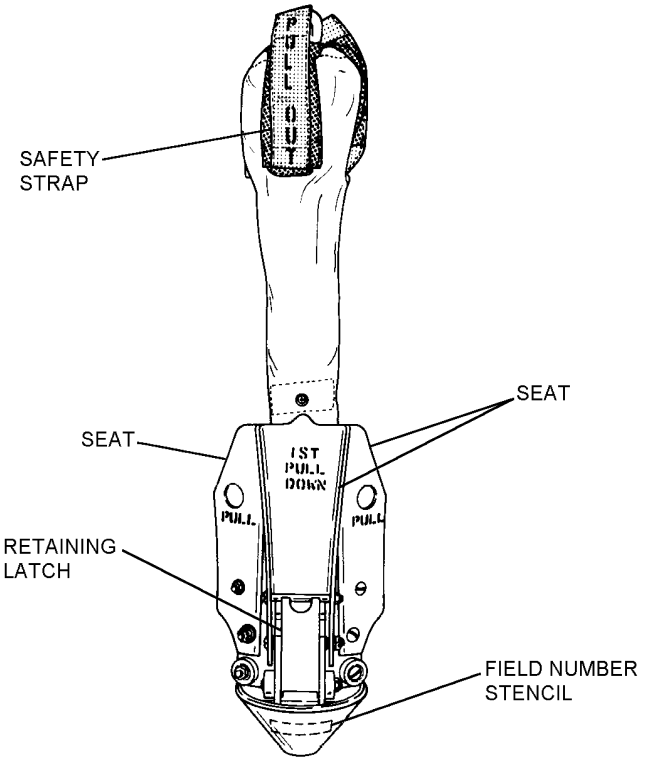

Figure 14-30. Forest Penetrator, Parts Nomenclature

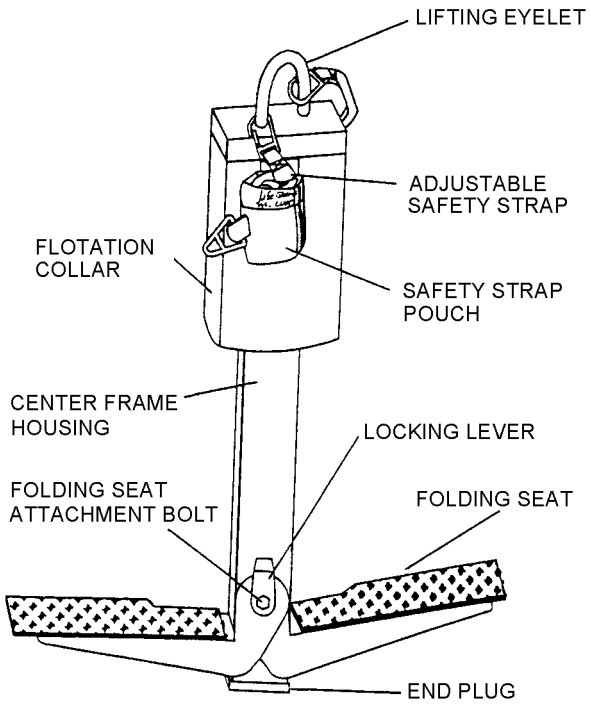

Figure 14-31. Rescue Seat (LSC P/N 420), Parts Nomenclature

3. Forest Penetrator Flotation Collar.

a. Inspect slide fastener for damage, corrosion, and ease of operation. Lightly lubricate slide fastener with lubricating oil (VV-L-800). Wipe off any excess with clean cloth.

b. Inspect fabric for cuts, tears, deterioration and abrasion.

c. Attach to Forest Penetrator as necessary.

d. Repair or replace in accordance with paragraph 14-224.

e. Clean in accordance with paragraph 14-227.

f. Inspect markings in accordance with paragraph 14-228.

14-224. REPAIR.

NOTE

When the Forest Penetrator is no longer repairable, replace with Rescue Seat P/N 420.

1. Forest Penetrator. Repairs for the Forest Penetrator are limited to cleaning, removing corrosion, lubricating zipper and retracting/locking mechanism and replacement of cotter pins (figure 14-33, items 2 and 17) when corroded, broken or missing. After lubricating, wipe excess with clean dry cloth.

2. Forest Penetrator Flotation Collar. Repairs are limited to cleaning and lubricating zipper.

CAUTION

Perform a Tension (Push/Pull) Test and Load Test after making repairs to Rescue Seat.

3. Rescue Seat. Repairs are limited to cleaning, removal of corrosion and the replacement of components listed in table 14-10.

14-225. TENSION (PUSH/PULL) TEST RESCUE SEAT P/N 420.

To perform the Tension (Push/Pull) Test, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Gauge, Tension (Push/Pull)	NIIN 00-473-0108
As Required	Cord, Nylon, Type III	MIL-C-5040E NIIN 00-240-2146
As Required	Sealing Compound (loctite)	MIL-S-46163 NIIN 01-054-3968

1. With the seats in the up position, tie a piece of type III nylon cord around the top of the folding seat two inches from the top.

2. Attach nylon cord to the push/pull gauge.

3. Gradually pull gauge until seat opens. Seat shall open between 8 and 12 pounds. Repeat for second seat.

4. If either seat fails the Tension (Push/Pull) Test, remove locking lever and set screw. Adjust seat attachment bolt with locking lever until desired pull down tension is achieved. Re-install locking lever and secure with setscrew and locking washer. Apply sealing compound (loctite) to setscrew before installing.

14-226. LOAD TEST FOR RESCUE SEAT P/N 420 (Conditional and Repair Only).

To perform the Load Test, proceed as follows:

1. Inspect the Rescue Seat for damage. If damaged, replace Rescue Seat.

2. If there are no visual signs of damage, attach and secure the Rescue Seat lifting eyelet to a lifting device, which will suspend the seat so that it does not touch the ground.

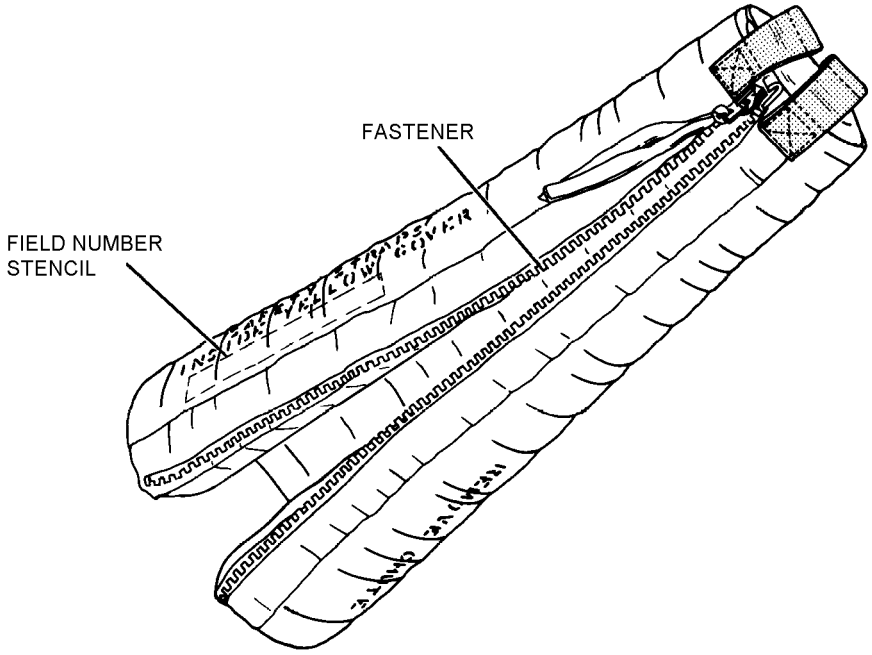

Figure 14-32. Flotation Collar, Parts Nomenclature

3. Attach 250 pounds of weight, by using rope or webbing, to each folding seat so that the weight is evenly distributed and secured.

4. Suspend the Rescue Seat for thirty minutes. While suspended, inspect for signs of damage. Lower seat to ground, disconnect weight, and inspect for signs of damage.

5. Failure of the Load Test shall render the Rescue Seat non-RFI.

6. If Rescue Seat passes Load Test, inspect in accordance with paragraph 14-223.

14-227. CLEANING. To clean the Rescue Seat, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Rescue Seat with clean water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Air dry.

14-228. MARKINGS. Compare markings to table 14-7, 14-8 and 14-9. Restore markings using indelible ink.

Table 14-7. Forest Penetrator Markings

Marking	Location	Letter Height
PULL OUT	End of Forest Penetrator Safety Strap	1/2 Inch
1ST PULL DOWN	Bottom of Forest Penetrator Seats	1/2 Inch
PULL	Sides of Forest Penetrator Seats	1/2 Inch
[Field Number]	Bottom of Forest Penetrator	1/2 Inch

Notes: 1. All markings shall be stamped or stencilled with wash-proof black ink. All words enclosed by brackets, in the column headed MARKING, shall not be stencilled on the equipment; they are to be regarded as instructions only.

Table 14-8. Flotation Collar Markings

Marking	Location	Letter Height
K26-1017-1 (CAGE 84955)	Top of Flotation Collar	1/2 Inch
SAFETY STRAPS INSIDE YELLOW COVER	Right Side of Flotation Collar	1/2 Inch
REMOVE CHUTE	Left Side of Flotation Collar	1/2 Inch
[Field Number]	Side of Flotation Collar	1/2 Inch

Notes: 1. All markings shall be stamped or stencilled with wash-proof black ink. All words enclosed by brackets, in the column headed MARKING, shall not be stencilled on the equipment; they are to be regarded as instructions only.

Table 14-9. Rescue Seat Markings P/N 420

Marking	Location	Letter Height
Warning: Do not lower with both seats extended. Improper use may cause serious injury or death.	Above each rescue seat on flotation cover	1/8 inch
[3 Diagrams with instructions]	Same as above	3/16 inch
[Mfg tag with the following:] Lifesaving Systems Corp P/N 420 S/N [as applicable]	Underneath seat on one side	Note 2

Notes: 1. All markings shall be stamped or stencilled with indelible black ink. All words enclosed by brackets, in the Marking column, shall not be stencilled on the equipment, they are to be regarded as information or instructions only.
2. If tag becomes loose, damaged or illegible, etch on bottom of seat.
3. Refer to NTTP 3-50.1 series for SAR Aircrewman procedures.
4. Letter heights are approximate.

14-229. ILLUSTRATED PARTS BREAKDOWN.

14-230. The Illustrated Parts Breakdown lists and illustrates the assemblies and detail parts of the Forest Penetrator and Flotation Collar, P/N K26-1000-9 and K26-1017-1, respectively. These assemblies are manufactured by Kaman Aerospace (CAGE 84955).

14-231. The Illustrated Parts Breakdown should be used when requisitioning and identifying parts.

14-232. Any parts required for LSC Rescue Seat P/N 420 must be open purchased from Lifesaving Systems Corporation, (CAGE 64249), 220 Elsberry Road, Apollo Beach, FL 33572-2289, Phone (813) 645-2748. Replacement parts for the Rescue Seat reflect LSC part numbers indicated in table 14-10.

Table 14-10. Rescue Seat Parts List

Item Description	Part Number
Flotation Cover	420-01
Flotation Foam	420-02
Safety Strap	420-03
Safety Strap Bolt	420-04
Safety Strap Locking Nut	H095
Plastic Seat	420-05
Locking Lever	420-07
Locking Lever Bolt	420-08
Seat Locking Nut	420-09
Seat Frame	420-10
Seat Bushing Set	420-11

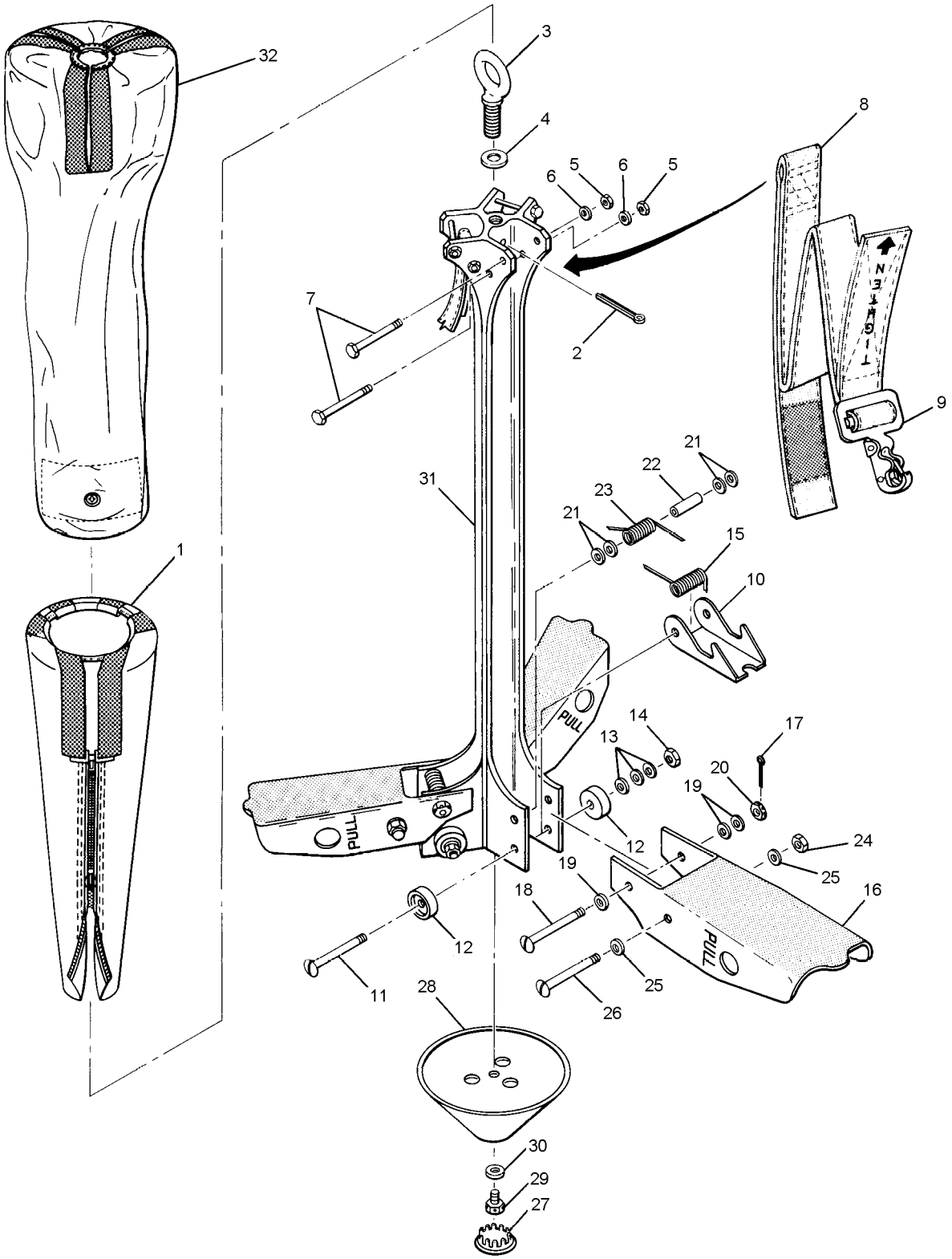

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Figure 14-33. Forest Penetrator

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
14-33	K26-1000-9	FOREST PENETRATOR ASSY (84955)	1	
-1	K26-1017-1	. COLLAR, Flotation (84955)	1	
-2	MS24665-379	. PIN, Cotter	1	
-3	K26-1009-11	. BOLT, Eye (84955)	1	
-4	MIL-S-22499	. SHIM, Laminated	1	
-5	NAS679A4	. NUT, Self-Locking, hexagon	6	
-6	AN960PD416L	. WASHER, Flat	6	
-7	AN425A	. BOLT	6	
-8	K26-1005-1	. STRAP ASSEMBLY, Safety (84955)	3	
-9	MS22018-1	. HOOK, Snap	3	
-10	K26-1018-11	. LATCH (84955)	3	
		(ATTACHING PARTS)		
-11	AN26-54	. BOLT, Clevis	1	
-12	K26-1010-11	. STOP (84955)	2	
-13	AN960PD616	. WASHER, Flat	3	
-14	NAS679A6	. NUT, Self-Locking, hexagon	1	
		---*---		
-15	K26-1019-11	. SPRING (84955)	1	
-16	K26-1042-3	. SEAT (84955)	3	
		(ATTACHING PARTS)		
-17	MS24665-300	. PIN, Cotter	1	
-18	AN26-54	. BOLT, Clevis	1	
-19	AN960PD616	. WASHER, Flat	3	
-20	AN320-6 or NAS67946	. NUT, Plain, castellated, shear	1	
		---*---		
-21	AN960PD616	. WASHER, Flat	12	
-22	NAS43DD6-94	. SPACER	3	
-23	K26-1008-11	. SPRING (84955)	3	
-24	NAS679A5	. NUT, Self-Locking, hexagon	3	
-25	AN960PD516	. WASHER, Flat	6	
-26	AN25-54	. BOLT, Clevis	3	
-27	SS51045	. CAP	1	
-28	K26-1083-1	. WEIGHT (84955)	1	
		(ATTACHING PARTS)		
-29	MS20074-06-05	. BOLT, Machine	1	
-30	AN935-516	. WASHER, Lock	1	
		---*---		
-31	K26-1001-1	. BODY ASSEMBLY (84955)	1	
-32	K26-1021-1	. COVER ASSEMBLY (84955)	1	

Section 14-13. Rappelling and Tree Extraction Equipment

14-233. GENERAL.

14-234. Rappelling equipment has advantages over the hoist because of an increase in speed, reliability, accuracy, safety and simplicity. Tree extraction equipment is used to extract a survivor from a tree.

Section 14-13.1. Descent Control Device

14-235. DESCRIPTION.

14-236. The Descent Control Device (figure 14-34) is used to control the rate of decent during rappelling operations.

14-237. MODIFICATION.

14-238. There are no modifications for the Descent Control Device that are required or authorized.

14-239. MAINTENANCE.

14-240. INSPECTION. The Descent Control Device shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-241. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-242, steps 1 and 2.

14-242. Special Inspection. To perform the Special Inspection of the Descent Control Device, proceed as follows:

1. Inspect for corrosion, contamination and damage.

2. Inspect detent pin for ease of operation.

3. Inspect shaft for developing grooves. Use a depth reading caliper micrometer to measure depth of groove. Replace Descent Control Device if groove shows 1/8 inch or more of groove wear.

4. Repair in accordance with paragraph 14-243.

14-243. REPAIR. Repairs are limited to cleaning. Refer to paragraph 14-244. All other discrepancies shall render the item non-RFI and it shall be replaced.

14-244. CLEANING. To clean the Descent Control Device, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse Descent Control Device with clean water.

2. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Dry using a clean cloth.

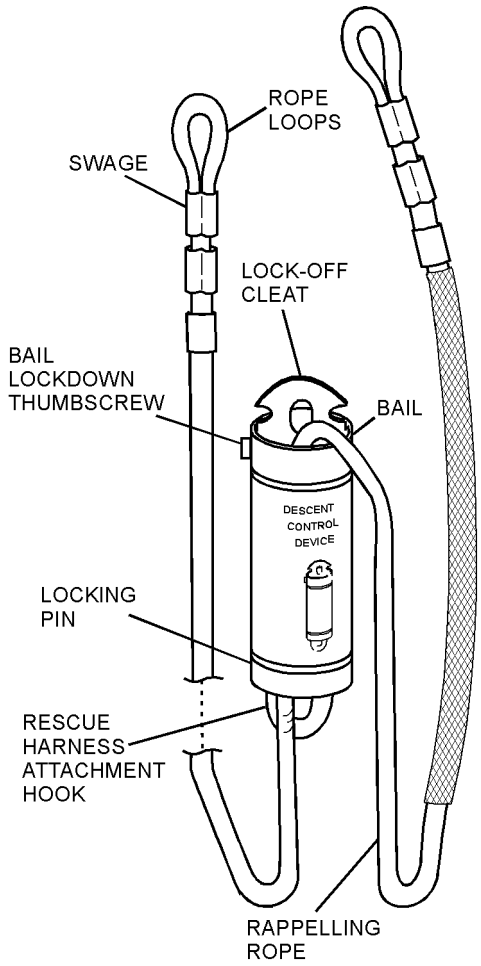

Figure 14-34. Descent Control Device

Section 14-13.2. Rappelling Ropes With Rope Storage Bags

14-245. DESCRIPTION.

14-246. Two ropes (150-foot and 250-foot) are used in conjunction with the Descent Control Device for rappelling. Each rope has a swaged end loop. Rappeling Rope storage bags are designed to carry and store the ropes. Rappelling rope storage bags are attached to a locally manufactured waist belt for assistance during rappelling operations.

14-247. MODIFICATION.

14-248. There are no modifications for the Rappelling Ropes that are required or authorized.

14-249. MAINTENANCE.

14-250. INSPECTION. The Rappelling Ropes and Storage Bags shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-251. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-252, steps 2 thru 8.

14-252. Special Inspection. To perform the Special Inspection of the Rappelling Ropes and Storage Bags, proceed as follows:

WARNING

Failure to comply with proper maintenance on rappelling ropes could cause injury or death to user.

NOTE

A Conditional Inspection shall be performed when the rope has had a possible overstressed occurrence.

1. Inspect maintenance record for number of rappels. Remove from service and discard ropes under the following conditions:

a. 200 rappels or 24 months from date placed in service.

b. Arrest of a free fall of two (2) feet or more.

c. After two rapid descent at speeds in excess of fifteen feet per second.

2. Inspect rope for cuts, fraying, broken strands, hard and soft spots and glazing (clear melted sections).

3. Inspect for the presence of contaminants such as fuels, dirt, rust and stains.

4. Inspect swaged loops for cuts, fraying and excessive wear.

5. Inspect swaged fittings for security of attachment and indications of rope separation from swaged fittings.

6. Stow ropes in accordance with paragraph 14-255.

7. Inspect storage bags for signs of contaminants.

8. Inspect storage bags for cuts, tears, holes broken stitches.

9. Inspect waist belt for contaminants, cuts, frays, deterioration and broken stitches.

10. Repair in accordance with paragraph 14-253.

14-253. REPAIR. Repairs on ropes are limited to cleaning; all other discrepancies require removal of ropes from service. Repairs of bags and waist belt are limited to cleaning and repair of broken stitches, holes and tears. Unlimited repairs are authorized on bags and waist belt only, however, replace bags and waist belt when no longer practical to repair.

14-254. CLEANING. To clean Rappelling ropes, bags and waist belts, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse Rappelling ropes, bags and waist belts with clean water.

2. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

14-255. STOWAGE. Use either of the following methods to stow rappelling ropes into storage bag.

1. Daisy-chain entire length of rope. Place in bag in an orderly fashion.

2. Fake entire rope into bag working back and forth until all rope is stowed.

Section 14-13.3. Basic Rappel Harness/Pro Series Rescue Harness

14-256. DESCRIPTION.

NOTE

For continuity throughout this section the Basic Rappel Harness and Pro Series Harness will be referred to as, harness, unless otherwise indicated.

The Pro Series Rescue Harness is the replacement for the Basic Rappel Harness. The Basic Rappel Harness is still authorized for use until no longer serviceable.

14-257. The harness (figures 14-35 and 14-35A) is used in conjunction with other rappelling equipment to quickly descend from a rescue aircraft to the ground. It is used to perform rappelling and belay operations as well as tree extraction procedures.

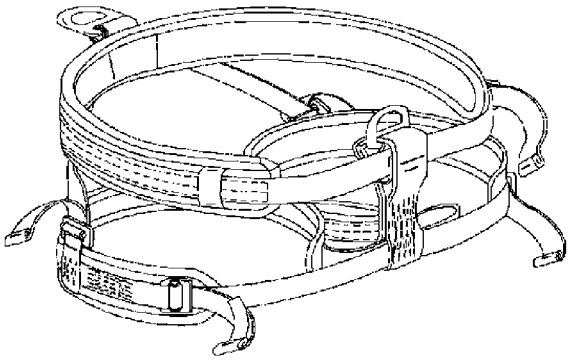

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Figure 14-35. Basic Rappel Harness

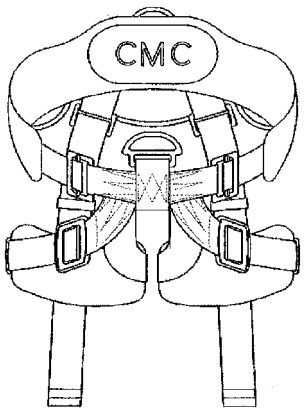

Figure 14-35A. Pro Series Rescue Harness

14-258. MODIFICATION.

14-259. There are no modifications for the harness that are required or authorized.

14-260. MAINTENANCE.

14-261. INSPECTION. The harness shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-262. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-263, steps 1 thru 4.

14-263. Special Inspection. To perform the Special Inspection of the harness, proceed as follows:

WARNING

If the harness has been subjected to shock loads, fall loads or abuse other than normal use, remove from service and destroy.

1. Inspect for broken, frayed stitching.

2. Inspect webbing for cuts, worn or frayed areas, broken fibers, soft or dry spots.

3. Inspect for contamination from oils, fuels, saltwater, etc.

4. Inspect all hardware for cracks, deformity, corrosion and ease of operation.

5. Repair harness in accordance with paragraph 14-264.

14-264. REPAIR. Repairs is limited to cleaning of harness. Refer to paragraph 14-265. All other discrepancies shall render the item non-RFI and it shall be replaced.

14-265. CLEANING. To clean harness, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse harness with clean water.

2. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

Section 14-13.4. Carabiners

14-266. DESCRIPTION.

14-267. Carabiners (figures 14-36 and 14-37) are oblong metal rings of various shapes and types used for rappelling and tree extraction. Carabiners have different weight limitations depending upon the type of metal and construction.

14-268. MODIFICATION.

14-269. There are no modifications for the Carabiners that are required or authorized.

14-270. MAINTENANCE.

14-271. INSPECTION. The Carabiners shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-272. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-273, steps 1 thru 4.

14-273. Special Inspection. To perform the Special Inspection of the Carabiners, proceed as follows:

CAUTION

Do not lubricate carabiners. Replace if locking sleeve or gate becomes stiff when operated.

1. Inspect for cracks, burrs and nicks.

2. Inspect gate for ease of operation and alignment.

3. Inspect gate pin for wear.

4. Inspect for corrosion.

5. Repair in accordance with paragraph 14-274.

6. Clean in accordance with paragraph 14-275.

14-274. REPAIR. Repairs are limited to the removal of corrosion and cleaning. Refer to paragraph 14-275. All other discrepancies shall render the item non-RFI and it shall be replaced.

14-275. CLEANING. To clean the Carabiners, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

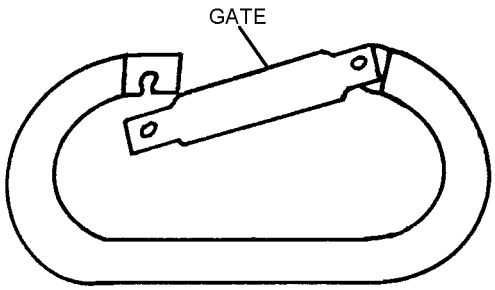

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Figure 14-36. Carabiner

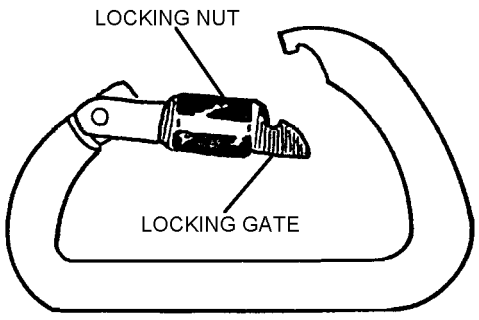

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Figure 14-37. Locking Carabiner

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Carabiners with clean water.

3. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Dry with a clean cloth.

Section 14-13.5. Spring Loaded Belay Plate

14-276. DESCRIPTION.

14-277. The Spring Loaded Belay Plate (figure 14-38) is used as a braking device for controlled dynamic belaying. It accommodates both a 9-mm and 11-mm rope.

14-278. MODIFICATION.

14-279. There are no modifications for the Spring Loaded Belay Plate that are required or authorized.

14-280. MAINTENANCE.

14-281. INSPECTION. The Spring Loaded Belay Plate shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-282. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-283, steps 1 through 5.

14-283. Special Inspection. To perform the Special Inspection of the Spring Loaded Belay Plate, proceed as follows:

1. Inspect for cracks, nicks, burrs, corrosion and deformity.

2. Inspect weld at top of spring for cracks and security of attachment.

3. Inspect for contaminants, such as salt deposits, oil, fuels, etc.

4. Inspect spring for security of attachment to plate.

5. Inspect plate screw for tightness.

6. Repair in accordance with paragraph 14-284.

14-284. REPAIR. Repairs are limited to cleaning. Refer to paragraph 14-285. All other discrepancies shall render the item non-RFI and it shall be replaced.

14-285. CLEANING. To clean the Belay Plate, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Isopropyl Alcohol	TT-I-735
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Belay Plate with clean water to remove salt deposits.

3. Remove oils, grease, fuels, etc. from Belay Plate with isopropyl alcohol or equivalent.

4. Wipe Belay Plate with a clean dry cloth.

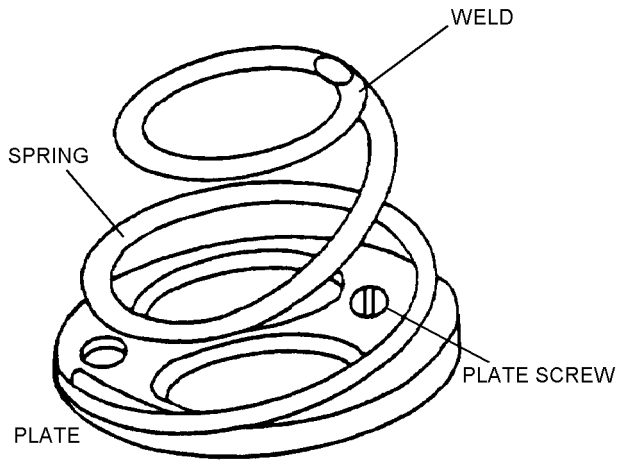

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Figure 14-38. Spring Loaded Belay Plate

Section 14-13.6. 540 Belay Device

To Be Provided

Section 14-13.7. Dynamic Rope (Kernmantle) With Storage Bag

14-286. DESCRIPTION.

14-287. The Dynamic Rope is an 11-mm rope used for hoisting evolutions.

14-288. MODIFICATION.

14-289. There are no modifications for the Dynamic Rope that are required or authorized.

14-290. MAINTENANCE.

14-291. INSPECTION. The Dynamic Rope shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-292. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-293, steps 1, 2 and 3 thru 5.

14-293. Special Inspection. To perform the Special Inspection of the Dynamic Rope, proceed as follows:

WARNING

Failure to comply with proper maintenance on Dynamic Ropes could cause injury or death to user.

All Dynamic Ropes shall be taken out of service after an actual arrestment or after 18 months from the date placed in service.

NOTE

A Conditional Inspection shall be performed when the rope has had a possible overstressed occurrence.

1. Tag rope with local serial number and place-in-service date.

2. Verify serial number with history card and mark rope with the place-in-service date.

3. Remove any knots from rope and inspect entire length of rope for contaminants, rust spots, stains, cuts, tears, hard and soft spots, glazing and broken strands.

4. Inspect for natural elasticity.

5. Inspect storage bag for tears, cuts, contaminants and broken stitches.

6. Repair in accordance with paragraph 14-294.

7. Refer to paragraph 14-296 for stowage of ropes.

14-294. REPAIR. Repairs on ropes are limited to cleaning; all other discrepancies require removal of ropes from service. Refer to paragraph 14-295. Repairs of storage bag are limited to cleaning and repair of broken stitches, holes and tears. Unlimited repairs are authorized on bag, however, replace bag when no longer practical to repair.

14-295. CLEANING. To clean Dynamic Ropes and Storage Bags, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse Dynamic Ropes and Storage Bags with clean water.

2. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

14-296. STOWAGE. Use either of the following methods to stow Dynamic Ropes into Storage Bag.

1. Retie figure-eight knot in both ends.

2. Daisy-chain entire length of rope. Place in bag in an orderly fashion.

3. Fake entire rope into bag working back and forth until all rope is stowed.

Section 14-13.8. Static Rope With Storage Bag

To Be Provided

Section 14-13.9. Nylon Strap

14-297. DESCRIPTION.

14-298. The Nylon Strap (figure 14-39) is a 1-inch tubular strap. The Nylon Strap is used as a self-equalizing four-point anchor to which a separate rappel line can be attached.

14-299. MODIFICATION.

14-300. There are no modifications for the Nylon Strap that are required or authorized.

14-301. MAINTENANCE.

14-302. INSPECTION. The Nylon Strap shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-303. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-304, steps 1 thru 4.

14-304. Special Inspection. To perform the Special Inspection of the Nylon Strap, proceed as follows:

WARNING

Failure to comply with proper maintenance on Nylon Strap could cause injury or death to user.

NOTE

Nylon Straps are cut to specific lengths and configured according to SAR operations.

1. Newly fabricated Nylon Straps shall be serialized and marked with the place-in-service date. Annotate on history card.

2. Verify serial number with history card and mark strap with the place in service date. Nylon Straps shall be taken out of service after 24 months from the date placed in service.

3. Inspect for cuts, fraying, broken strands, hard and soft spots, rust spots and contaminants.

4. Inspect for natural elasticity.

5. Repair in accordance with paragraph 14-305.

14-305. REPAIR. Repairs are limited to cleaning. All other discrepancies require removal from service. Refer to paragraph 14-306.

14-306. CLEANING. To clean Nylon Strap, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse Nylon Strap with clean water.

2. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

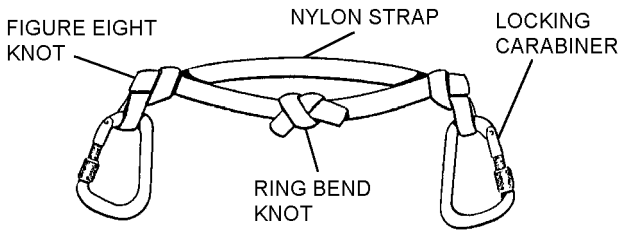

Figure 14-39. Nylon Strap

Section 14-14. Hoisting Vest (Full Body Fishnet)

14-307. DESCRIPTION.

14-308. The Hoisting Vest (figure 14-40) is a one piece vest made of a mesh material and designed to accommodate one person in overland rescues. It can be used to transport uninjured or ambulatory personnel from ship-to-helicopter or helicopter-to-ship. It can also be used over water when a flotation device is used.

14-309. MODIFICATION.

14-310. There are no modifications for the Hoisting Vest that are required or authorized.

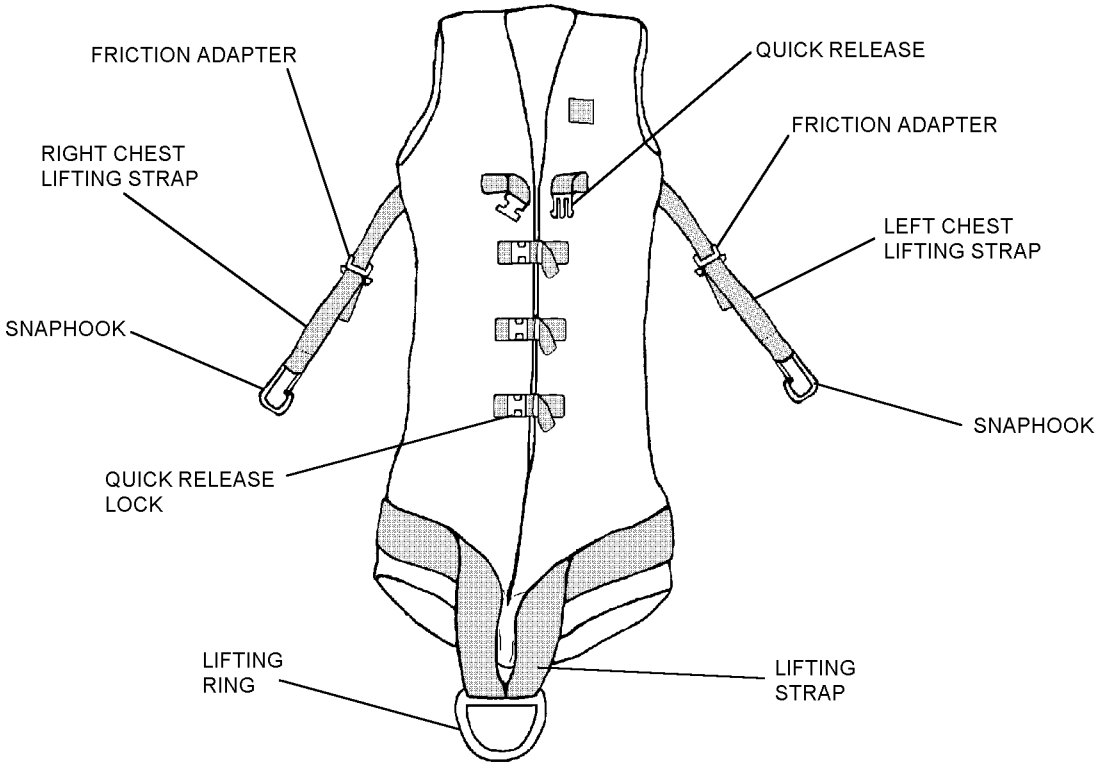

Figure 14-40. Hoisting Vest (P/N LSC207)

14-311. MAINTENANCE.

14-312. INSPECTION. The Hoisting Vest shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-313. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-314, steps 1 thru 4.

14-314. Special Inspection. To perform the Special Inspection of the Hoisting Vest, proceed as follows:

1. Inspect mesh material and webbing for cuts, tears and fraying.

2. Inspect all hardware for nicks, burrs, cracks, deformity, corrosion and ease of operation.

3. Inspect all stitching for loose, broken or fraying stitches.

4. Inspect for contaminants.

5. Repair in accordance with paragraph 14-315.

14-315. REPAIR. Repairs are limited to the following:

1. No more than three stitching repairs allowed on either the lifting strap or right and left chest lifting straps. No more than three broken stitches per repair.

2. No more than two stitching repairs allowed on any one of the 1-inch webbing attachments for quick release buckles. No more than three broken stitches per repair.

3. No repairs authorized on mesh material.

4. Clean in accordance with paragraph 14-316.

14-316. CLEANING. To clean Hoisting Vest, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Hoisting Vest with clean water.

3. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Hang to dry.

Section 14-15. Climber's Belt and Strap

14-317. DESCRIPTION.

14-318. The Climber's Belt and Strap (figure 14-41) is a device the rescuer uses to secure themselves to the tree for the climb.

14-319. MODIFICATION.

14-320. There are no modifications for the Climber's Belt and Strap that are required or authorized.

14-321. MAINTENANCE.

14-322. INSPECTION. The Climber's Belt and Strap shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-323. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-324, steps 1 through 3.

14-324. Special Inspection. To perform the Special Inspection of the Climber's Belt and Strap, proceed as follows:

1. Inspect all hardware for cracks, nicks, deformity, corrosion, security of attachment and ease of operation.

2. Inspect leather for dryness, cracks, tears and contamination.

3. Inspect stitching for broken, frayed stitches.

4. Repair in accordance with paragraph 14-325.

14-325. REPAIR. Repairs are limited to cleaning and conditioning leather. Refer to paragraph 14-326. Replace Climber's Belt and Strap as necessary.

14-326. CLEANING. To clean Climber's Belt and Strap, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Leather Cleaner	Local Purchase
As Required	Leather Conditioner	Local Purchase
1	Gum Eraser	Available through GSA

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Clean leather with a leather cleaner and condition leather with a leather conditioner. Follow manufacturer's instructions.

3. Small dirty areas that cannot be wiped off can be cleaned with a gum eraser.

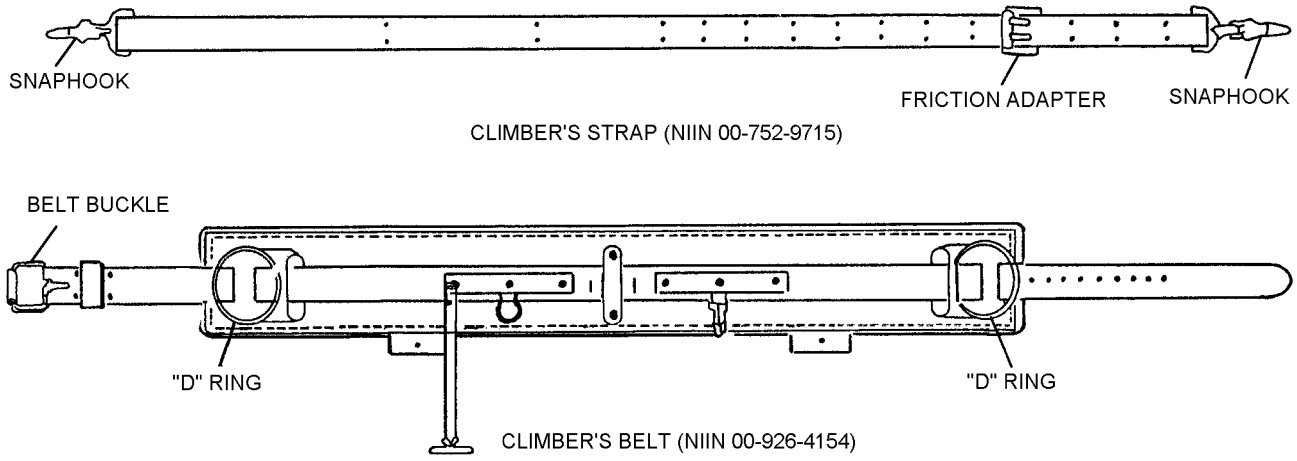

Figure 14-41. Climber's Belt and Strap

Section 14-16. Climber's Spikes

14-327. DESCRIPTION.

14-328. The Climber's Spike (figure 14-42) is a strap with spike device which is attached around the wearer's leg and boot to assist in climbing a tree to extract a survivor.

14-329. MODIFICATION.

14-330. There are no modifications for the Climber's Spikes that are required or authorized.

14-331. MAINTENANCE.

14-332. INSPECTION. The Climber's Spikes shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-333. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-334, steps 1 thru 4.

14-334. Special Inspection. To perform the Special Inspection of the Climber's Spikes, proceed as follows:

WARNING

Remove Climber's Spikes from service if there are any signs of damage or deterioration. Never alter the straps or spikes.

1. Inspect leather straps for signs of burns, cuts, broken stitches, dryness, cracking and wear.

2. Inspect spikes and shanks for dents, gouges, scratches and corrosion.

3. Inspect for bent, loose or missing rivets.

4. Inspect buckles for distortion and ease of operation.

5. Repair in accordance with paragraph 14-335.

14-335. REPAIR. Repairs are limited to the removal of corrosion, cleaning and conditioning of leather parts. Refer to paragraph 14-336. Replace Climber's Spikes as necessary.

14-336. CLEANING. To clean Climber's Spikes, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Leather Cleaner	Local Purchase
As Required	Leather Conditioner	Local Purchase
1	Gum Eraser	Available through GSA

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Clean leather with a leather cleaner and condition leather with a leather conditioner. Follow manufacturer's instructions.

3. Small dirty areas that cannot be wiped off can be cleaned with a gum eraser.

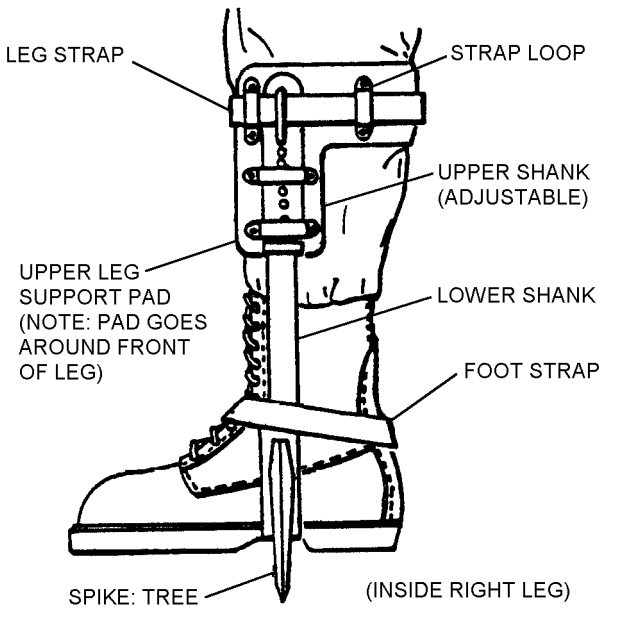

Figure 14-42. Climber's Spikes

Section 14-17. Climber's Helmet and Headlamp

14-337. DESCRIPTION.

14-338. The Climber's Helmet and Headlamp (figure 14-43) are used for overland rescues. It protects the wearer from falling rocks, ice and other obstacles. The Headlamp provides hands free lighting for nighttime rescues.

14-339. MODIFICATION.

14-340. There are no modifications for the Climber's Helmet or Headlamp that are required or authorized.

14-341. MAINTENANCE.

14-342. INSPECTION. The Climber's Helmet and Headlamp shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-343. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-344, steps 1a-e and 2a-c.

14-344. Special Inspection. To perform the Special Inspection of the Climber's Helmet and Headlamp, proceed as follows:

WARNING

Helmets shall be replaced after a serious impact even if they do not show outward signs of damage. UV radiation deteriorates helmet materials, helmets shall be removed from service after 5 years.

1. Helmet:

a. Inspect helmet for cracks, dents or damages.

b. Inspect head and chin straps for signs of contamination, wear and tearing.

c. Inspect buckles for damage and ease of operation.

d. Inspect head and ear cushions for damage and wear.

e. (Place-In-Service Only) Mark inside of helmet with the place in service date.

f. Repair in accordance with paragraph 14-345.

2. Headlamp:

a. Inspect headlamp light and battery compartments for signs of damage and corrosion.

b. (Place-in-Service Only) Install batteries and test headlamp for proper operation. Annotate expiration of batteries on history card.

c. Inspect headband and hardware for signs of damage, contamination and wear.

d. Inspect batteries for expiration date.

e. Turn light on to ensure headlamp is operable.

f. Repair in accordance with paragraph 14-345.

g. Clean in accordance with paragraph 14-346.

14-345. REPAIR. Repairs are limited to cleaning. Refer to paragraph 14-346. Replace as necessary.

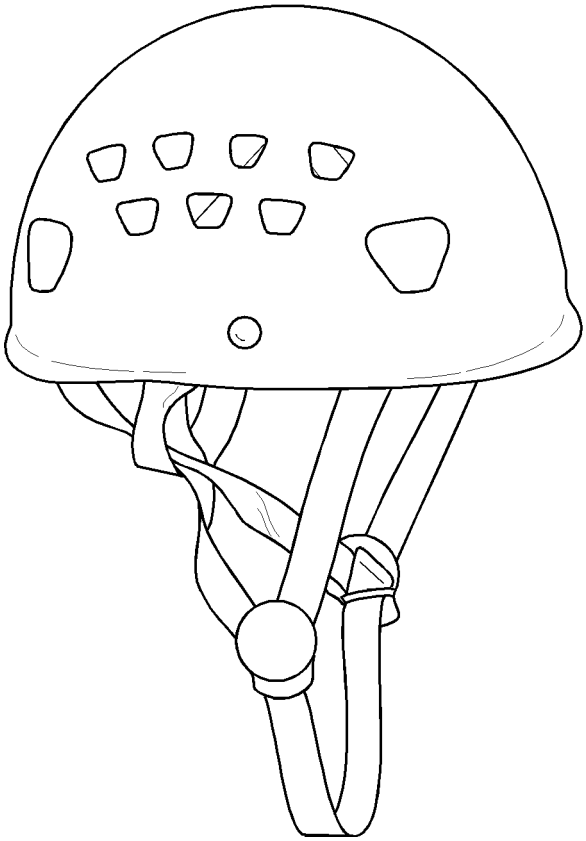

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Figure 14-43. Climber's Helmet and Headlamp

14-346. CLEANING. To clean Climbers Helmet and Headlamp, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Dampen a cloth with a mixture of clean water and detergent and wipe contaminated area until area is clean.

2. Rinse cloth with fresh water and wipe area again to remove any soap residue.

3. Let dry before returning to service.

Section 14-18. V-Bladed Rescue Knife

14-347. DESCRIPTION.

14-348. The Rescue Knife (figure 14-44) is a 10-inch by 5-inch wide device which consists of a dzus fastener remover on one end and can be used to cut webbing or other cloth materials up to 1/4 inch thick. It can be used as a replacement to the Pnuematic Rescue tool.

14-349. MODIFICATION.

14-350. There are no modifications for the V-Bladed Rescue Knife that are required or authorized.

14-351. MAINTENANCE.

14-352. INSPECTION. The V-Bladed Rescue Knife shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-353. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-354, steps 1 thru 3.

14-354. Special Inspection. To perform the Special Inspection of the V-Bladed Rescue Knife, proceed as follows:

WARNING

Blades are sharp and can cause injury. Use caution when handling and stowing.

1. Inspect for damage, corrosion and contamination.

2. Inspect blade for nicks, burrs.

3. Inspect screws for security of attachment.

4. Repair in accordance with paragraph 14-355.

14-355. REPAIR. Repairs are limited to the removal of corrosion, cleaning and replacement of blades. Replace Rescue Knife as necessary.

14-356. Replacement of Blades. To replace the blades, proceed as follows:

1. Remove screws.

2. Slide out old blades and replace with new ones.

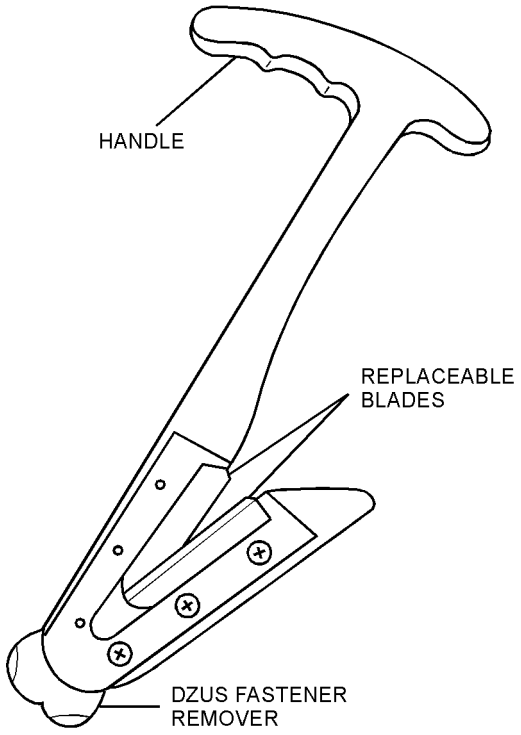

Figure 14-44. V-Bladed Rescue Knife

3. Replace screws. Ensure that they are secure.

14-357. CLEANING. To clean the V-Bladed Rescue Knife, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Rescue Knife with clean water.

3. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Dry with clean cloth.

Section 14-19. Rescue 8

14-358. DESCRIPTION.

14-359. The Rescue 8 (figure 14-45) is a device designed for high-angle rescue work. It accommodates both large and heavy-duty ropes. Made of hot-forged 6061 T-6 aircraft-quality aluminum and has a minimum breaking strength of 10,000 pounds.

14-360. MODIFICATION.

14-361. There are no modifications for the Rescue 8 that are required or authorized.

14-362. MAINTENANCE.

14-363. INSPECTION. The Rescue 8 shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-364. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-365, step 1.

14-365. Special Inspection. To perform the Special Inspection of the Rescue 8, proceed as follows:

1. Inspect for nicks, burrs, deformity, corrosion and contamination.

2. Repair in accordance with paragraph 14-366.

14-366. REPAIR. Repairs are limited to the removal of corrosion and cleaning. Replace Rescue 8 as necessary.

14-367. CLEANING. To clean the Rescue 8, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Rescue 8 with clean water.

3. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Dry with clean cloth.

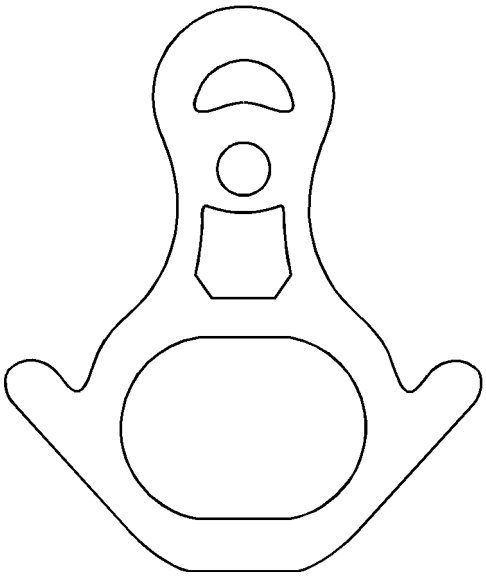

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Figure 14-45. Rescue 8

Section 14-20. Sven Folding Saw

14-368. DESCRIPTION.

14-369. The Sven Folding Saw (figure 14-46) is a 21-inch collapsible aluminum saw with a stainless steel blade that can cut a 5-inch diameter tree limb.

14-370. MODIFICATION.

14-371. There are no modifications for the Folding Saw that are required or authorized.

14-372. MAINTENANCE.

14-373. INSPECTION. The Folding Saw shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-374. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-375, steps 1 and 2.

14-375. Special Inspection. To perform the Special Inspection of the Folding Saw, proceed as follows:

WARNING

Blade is sharp and can cause injury. Use caution when handling and stowing.

1. Inspect for damage, corrosion and contamination.
2. Inspect blade for nicks, cracks and wear.
3. Repair in accordance with paragraph 14-376.

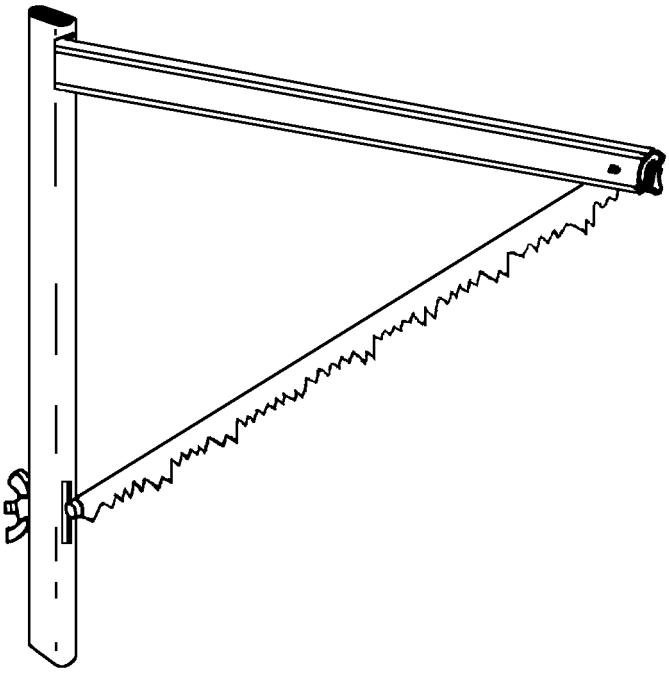
14-376. REPAIR. Repairs are limited to the removal of corrosion, cleaning and replacement of blade. Refer to table 14-1 for replacement blade. Replace saw as necessary.

14-377. CLEANING. To clean the Folding Saw, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.
2. Rinse Folding Saw with clean water.
3. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.
4. Rinse a second time with fresh water to remove soap and contaminants.
5. Dry with clean cloth.



014046

Figure 14-46. Sven Folding Saw

Section 14-21. Rescue Pulleys

14-378. DESCRIPTION.

14-379. Rescue Pulleys (figure 14-47) are used in conjunction with rappel/belay rigging equipment for overland rescue operations. Two types of pulleys are used, single and double pulley system. Heavy duty heat-treated aluminum alloy wheels make them lightweight and durable.

14-380. MODIFICATION.

14-381. There are no modifications for the Rescue Pulleys that are required or authorized.

14-382. MAINTENANCE.

14-383. INSPECTION. The Rescue Pulleys shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-384. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-385, steps 1 thru 4.

14-385. Special Inspection. To perform the Special Inspection of the Rescue Pulleys, proceed as follows:

NOTE

The pulleys bushings and ball bearings are permanently lubricated. No lubrication is required. No disassembly of pulleys is authorized.

1. Inspect wheel assembly for ease of rotation and excessive visible wearing of wheel runner.

2. Inspect for corrosion, contamination and damage.

3. Inspect for cracks, nicks and sharp edges.

4. Inspect axle nuts for proper alignment of blue witness line.

5. Repair in accordance with paragraph 14-386.

NOTE

Corroded pulleys shall be replaced.

14-386. REPAIR. Repairs are limited to cleaning only. Replace pulleys as necessary.

14-387. CLEANING. To clean the Rescue Pulleys, proceed as follows:

Materials Required

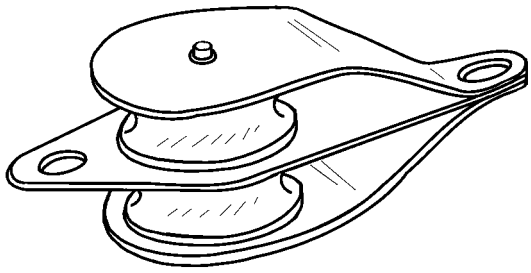
Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse Rescue Pulleys with clean water.

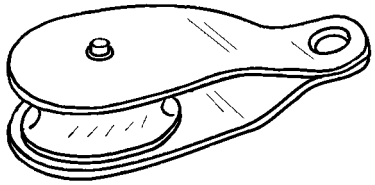
2. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Dry with clean cloth.



P/N 315500



P/N 315000

014047

Figure 14-47. Rescue Pulleys P/Ns 315000 and 315500

Section 14-22. Entrenching Tool

14-388. DESCRIPTION.

14-389. The Entrenching Tool (figure 14-48) is used to dig at crash sites, put out fires or make survival shelters.

14-390. MODIFICATION.

14-391. There are no modifications for the Entrenching Tool that are required or authorized.

14-392. MAINTENANCE.

14-393. INSPECTION. The Entrenching Tool shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-394. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-395, steps 1 and 2.

14-395. Special Inspection. To perform the Special Inspection of the Entrenching Tool, proceed as follows:

1. Inspect for damage, corrosion and contamination.

2. Inspect serrated and smooth blade edge for missing teeth, nicks, burrs, cracks and wear.

3. Repair in accordance with paragraph 14-396.

14-396. REPAIR. Repairs are limited to the removal of corrosion, cleaning and sharpening of blade.

1. Use a file to remove nicks, burrs and sharpen smooth edge of blade. Serrated edge cannot be sharpened.

14-397. CLEANING. To clean the Entrenching Tool, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

2. Rinse Entrenching Tool with clean water.

3. Using a cloth and a mixture of clean water and detergent, wipe contaminated area until area is clean.

4. Rinse a second time with fresh water to remove soap and contaminants.

5. Dry with clean cloth.

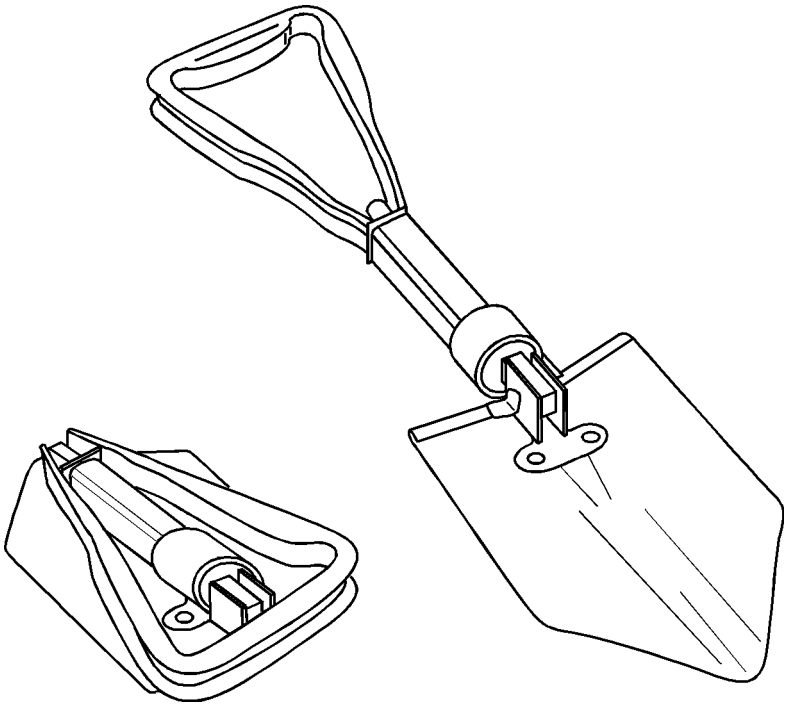


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Figure 14-48. Entrenching Tool

Section 14-23. SAR Medical Kit, Level A/B/C

14-398. DESCRIPTION.

14-399. The Level A and Level B SAR Medical Kits (figure 14-49) are designed for all helicopter commands with SAR capability. The Level B SAR Medical Kit is designed to be used in conjunction with the Level A Medical Kit when a SAR Medical Technician with NEC 8401 is utilized. The Level C Medical Kit is for HCS-4 and HCS-5 use only.

14-400. MODIFICATION.

14-401. There are no modifications for the Level A, B or C Medical Kits that are required or authorized.

14-402. MAINTENANCE.

14-403. INSPECTION. The Level A, B and C Medical Kits shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-404. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-405, steps 1 thru 3.

14-405. Special Inspection. To perform the Special Inspection of the Level A, B and C Medical Kits, proceed as follows:

1. Inspect Level A, B or C bag for contamination, cuts, tears, broken stitches and fraying.

2. Inspect hardware for damage, proper operation and security of attachment.

NOTE

Inspection and replacement of Level B and C medical items shall be the responsibility of the SAR Corpsman or qualified medical personnel.

3. Inspect medical items (Level A only) for damage, deterioration and expiration dates. Replace damaged or expired items.

NOTE

Medical items cannot expire during a repack cycle.

4. Repair in accordance with paragraph 14-406.

14-406. REPAIR. Repair of the bag shall consist of patching of minor tears, stitching of broken or fraying stitches, patching of tears or cuts and the replacement of medical items. Unlimited repairs of bags are authorized, however replace bag when no longer practical to repair.

14-407. CLEANING. To clean the bag, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse bag with clean water.

2. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

3. Rinse a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

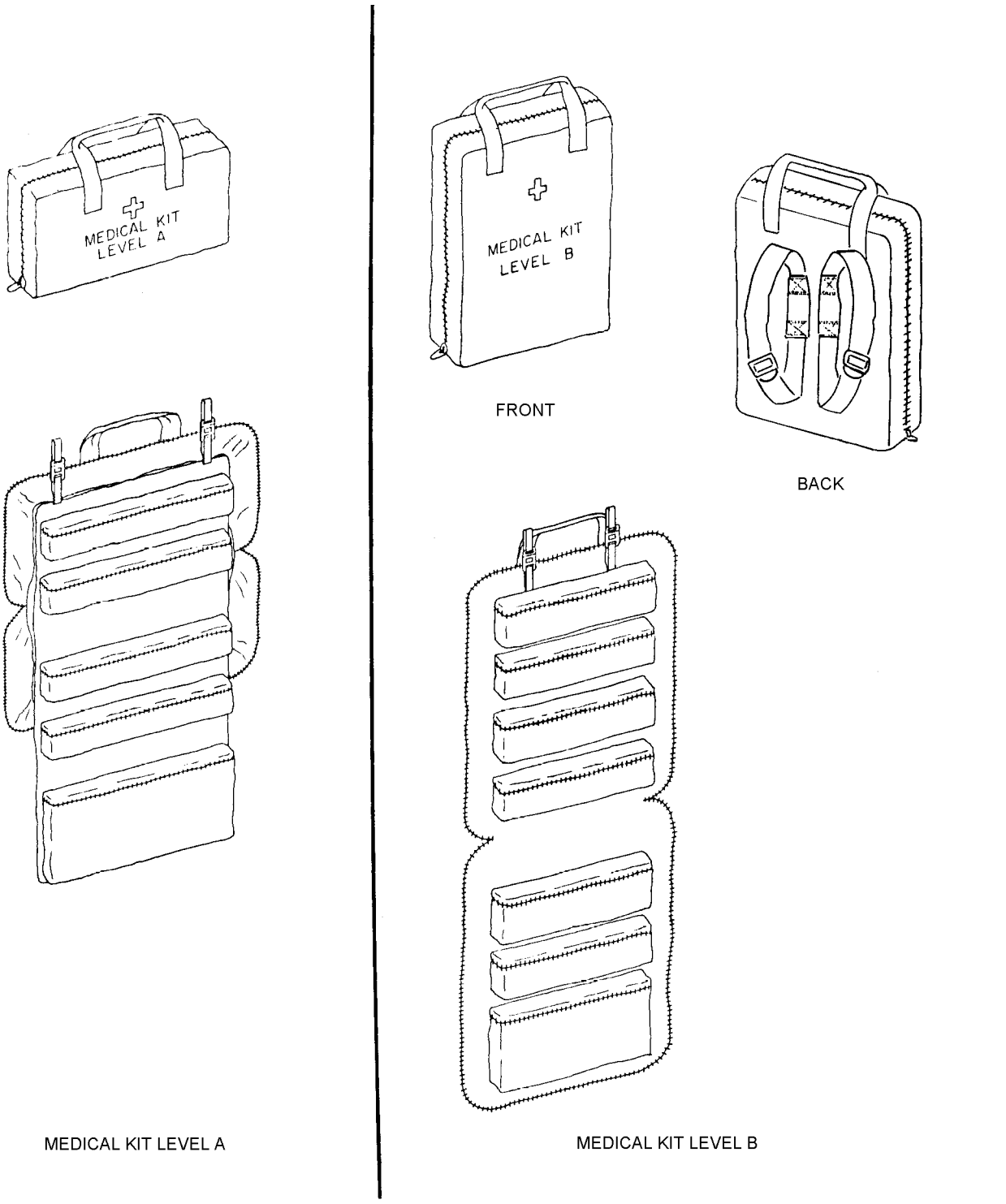

Figure 14-49. Level A, Level B and Level C Medical Kits (Sheet 1 of 2)

MEDICAL KIT LEVEL C
(HCS-4 AND HCS-5 USE ONLY)

MEDICAL KIT LEVEL C FRONT OPEN

MEDICAL KIT LEVEL C BACK OPEN

Figure 14-49. Level A, Level B and Level C Medical Kits (Sheet 2)

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Section 14-24. SAR Aircrewmember Personal Equipment

14-408. GENERAL.

14-409. Refer to the appropriate Chapter in this manual for inspection of the individual survival items for the TRI-SAR Harness and HBU-23/P.

Section 14-24.1. TRI-SAR Harness Assembly

14-410. DESCRIPTION.

WARNING

Deleted

14-411. The TRI-SAR Harness (figure 14-50) with flotation provides a slightly reclined seated position allowing total use of the rescuer's hands. The flotation vest provides a minimum of 35 pounds of buoyancy. The flotation vest accommodates all required survival items and can be removed easily for maintenance. The harness is available in five sizes (table 14-11).

14-412. MODIFICATION.

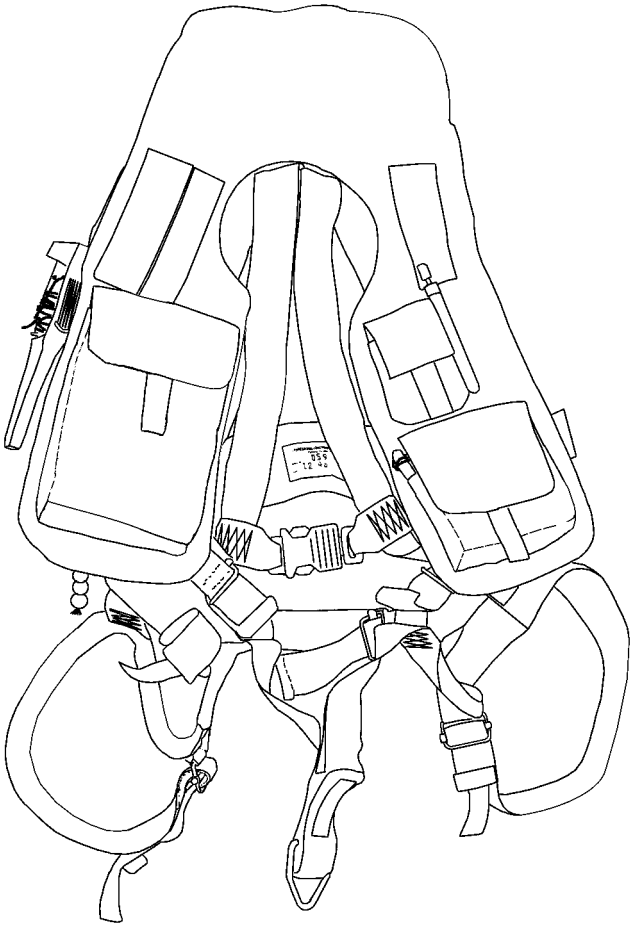
14-413. There are no modifications for the TRI-SAR Harness that are required or authorized.

14-414. MAINTENANCE.

14-415. INSPECTION. The TRI-SAR Harness Assembly shall be subjected to Place-In-Service, Preflight/Postflight, and Special Inspections.

NOTE

Refer to Chapters 9, 11, 12, and 13 of this manual for inspection of survival items.



014050

Figure 14-50. TRI-SAR Harness Assembly, P/N 487

Table 14-11. Sizing Guidelines for TRI-SAR Harness Assembly

Size	Weight (Lbs)	Height (In)
Small	110 to 140	less than 64
Medium	130 to 170	64 to 69
Large	160 to 185	69 to 73
X-Large	170 to 225	72 to 78
XX-Large	200 to 300	74 to 80
Notes: 1. Size Small is normally not stocked but can be manufactured upon receipt of order. Delivery time may be longer for the size Small items than for the other sizes.		

14-416. Place-In-Service Inspection. A Place-In-Service Inspection for the TRI-SAR Harness Assembly shall consist of the following:

Materials Required

Quantity	Description	Reference Number
4	Locking Nut (Note 1)	H089
As Required	Phillips Head Machine Screw (Note 1)	H090
As Required	Torque Seal (Sealant)	F-900

Notes: 1. Available open purchase from the following source:
Lifesavings Systems Corp.
220 Elsberry Rd.
Apollo Beach, FL 33572-2289
(813) 645-2748
Fax: (813) 645-2768.

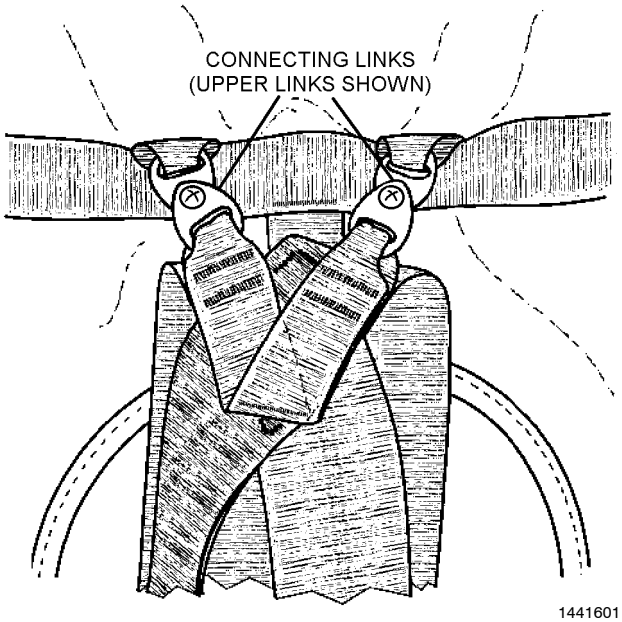
Support Equipment Required

Quantity	Description	Reference Number
As Required	11/32 Inch Open-end or Socket Wrench	—
As Required	Phillips Screwdriver	—
As Required	Torque Wrench 10-50 in-lb	—

NOTE

Future procurements of the TRISAR Harness Assembly will come with the flotation vest detached from the harness. Locking nuts and screws will be provided separately. This will reduce man-hour and part costs.

1. (For attached flotation assemblies) Remove flotation vest from harness by removing the four screws from the connecting links located on back of flotation vest and remove harness webbing from the flotation vest webbing keepers. Retain screws for re-assembly and dispose of locking nuts.



Step 1 - Para 14-416

2. Forward the flotation vest to Intermediate Level maintenance for Place-In-Service Inspection.

3. Inspect the harness for cuts, tears, open seams, loose or broken stitching.

WARNING

Ensure bayonet fitting locks into the buckle and does not release until both buckle releases are pressed at the same time.

4. Inspect all hardware for corrosion, damage, wear, security of attachment and ease of operation.

5. Inspect material and webbing for contamination.

6. Perform service life check of harness in accordance with paragraph 14-419.

7. Rig and pack inspected flotation vest in accordance with paragraph 14-422.

NOTE

Ensure screw heads face flotation vest to avoid abrasion.

8. Re-attach flotation vest utilizing the screws and locking nuts. Place harness connecting links on top of flotation vest connecting links and align metal connecting links so that pointed ends face each other. Install screws with the heads facing flotation vest. Torque screws 20 to 25 in-lb and tamper dot each locking nut.

9. Record inspection on appropriate forms in accordance with COMNAVAIRFORINST 4790.2.

14-417. Preflight/Postflight Inspection. It is the aircrewmember's responsibility to clean the TRI-SAR Harness Assembly after every immersion in salt/fresh water. Inspect the TRI-SAR Harness Assembly as follows:

1. Inspect all components of the TRI-SAR Harness Assembly for cuts, tears, open seams, loose or broken stitching, and contamination.

WARNING

Ensure bayonet fitting locks into the buckle and does not release until both buckle releases are pressed at the same time.

2. Inspect all hardware for corrosion, cracks, security of attachment, and ease of operation. Inspect for presence of tamper dot on flotation attachment screws.

3. Check to ensure red beaded actuating handle is snapped into place and extends down from the lower right lobe on the flotation vest.

4. Inspect for presence of survival items and proper operation of strobe light and survival radio.

5. For TRISAR assemblies with Emerson SAR Knife installed.

a. Open knife and check for side to side play on knife blade.

b. Check knife for missing or loose screws. There are nine screws.

c. Inspect lanyard for fraying.

d. Discrepancies shall be reported to maintenance personnel.

6. Inspect for the presence of safety wire on inflation assembly.

7. Clean TRI-SAR Harness Assembly as required in accordance with paragraph 14-421.

8. Report any discrepancies to maintenance personnel.

14-418. Special Inspection TRI-SAR Harness Assembly (90-Day). A Special 90-Day Inspection shall be performed by Organizational Level maintenance or above on the TRI-SAR Harness Assembly. Inspect the TRI-SAR Harness Assembly as follows:

Materials Required

Quantity	Description	Reference Number
4	Locking Nut (Note 1)	H089
As Required	Phillips Head Machine Screw (Note 1)	H090
As Required	Torque Seal (Sealant)	F-900
As Required	Corrosion Preventive	NIIN 01-381-6357

Notes: 1. Available open purchase from the following source:
Lifesavings Systems Corp.
220 Elsberry Rd.
Apollo Beach, FL 33572-2289
(813) 645-2748
Fax: (813) 645-2768

Support Equipment Required

Quantity	Description	Reference Number
As Required	11/32 Inch Open-end or Socket Wrench	—
As Required	Phillips Screwdriver	—
As Required	Torque Wrench 10-50 in-lb	—

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1. Remove flotation vest from harness by removing the four screws from the connecting links located on back of flotation vest and remove harness webbing from the flotation vest webbing keepers.

2. Remove survival items and forward flotation vest to Intermediate Level maintenance for 90-Day Special Inspection. Retain screws for re-assembly and dispose of locking nuts.

3. Inspect the harness for cuts, tears, open seams, and loose or broken stitching.

WARNING

Ensure bayonet fitting locks into the buckle and does not release until both buckle releases are pressed at the same time.

4. Inspect all hardware for corrosion, damage, wear, security of attachment, and ease of operation.

5. Inspect material and webbing for contamination.

NOTE

If contamination is suspected, test in accordance with paragraph 14-420.

6. Clean harness as necessary to remove stains, dirt, grease, perspiration, or other contaminants. Refer to paragraph 14-421.

7. Verify service life of harness in accordance with paragraph 14-419.

8. Inspect survival items in accordance with applicable chapter of this manual.

9. Rig and pack flotation vest in accordance with paragraph 14-422.

NOTE

Ensure screw heads face flotation vest to avoid abrasion.

10. Re-attach inspected flotation vest utilizing the retained screws and new locking nuts. Place harness connecting links on top of flotation vest connecting links and align metal connecting links so that pointed ends face each other. Install screws with the heads facing flotation vest. Torque screws 20 to 25 in-lb and tamper dot each locking nut.

11. Record inspection on appropriate forms in accordance with COMNAVAIRFORINST 4790.2.

14-419. HARNESS SERVICE LIFE CHECK. The service life of the harness is 7 years from the date it was placed into service and 12 years from date of manufacturer which ever occurs first. When the harness reaches its service life limit, it shall be removed from service. The service life check is performed as follows:

NOTE

Use a light color marking ink or equivalent to stencil the harness. Do not use a dark color that will not show up on harness.

1. When a harness is placed in service, the start date shall be stenciled on the inside of the back strap using light-colored marking ink. The date shall be indicated by month and year.

2. When an in-service harness lacks a start of service date, service life shall expire 7 years from the date of manufacturer.

3. The manufacturer's date is located on a manufacturer's tag on the inside of the back strap.

NOTE

If manufacturer's tag becomes worn, loose, or torn, stencil manufacturer's date on inside of back strap.

14-420. CONTAMINATION INSPECTION. Fabric and webbing material suspected of contamination shall be tested with pH test paper. A pH reading of 5.0 to 9.0 is in the safe zone. Readings below 5.0 indicate excess acidity, and readings above 9.0 indicate excess alkalinity. Inspect for acid or alkaline contamination as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Distilled or Potable Water	Local Procurement
As Required	Test Kit Alkacid	A-988 NIIN 00-420-0507

CAUTION

Ensure that testing area is free of contaminants to avoid false readings or damage to assembly.

1. Dampen suspected area with potable or distilled water.

NOTE

Handle test paper by the edge to avoid false readings.

2. Place a piece of full-range test paper (0.0 to 14.0) on dampened area. A color change will indicate the approximate pH value and the specific short-range test paper to be used.

3. Place short-range test paper on dampened area. The color change indicates the pH factor of affected area. By matching test strip with applicable range color chart, the acid or alkaline strength can be determined.

4. If acid contamination is found, the item shall be removed from service.

5. If alkaline contamination is found, the item shall be rinsed in cool potable water and retested until a safe reading is obtained. All fabric and webbing shall be carefully inspected for any signs of deterioration.

14-421. CLEANING. The components of the TRI-SAR Harness Assembly shall be cleaned after every immersion in salt-fresh water and as often as necessary to remove dirt, perspiration stains, grease, or other contaminants, which may degrade performance. Clean each component as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Cloth, Lint-free	MIL-C-85043
As Required	Mild Soap, Ivory	Local Procurement

1. Soak in tub of cool potable water for two or three hours to loosen any set stains or dirt.

2. Remove from water, hang on wooden hanger, and let excess water drain off.

3. Immerse again in tub of clean potable water not to exceed 200°F. Gently agitate by hand.

NOTE

Petroleum and other stubborn stains may be removed by repeated applications of mild soap and warm water by gently scrubbing with a lint free cloth. Rinse thoroughly.

4. After 5 to 10 minutes, remove from water, and hang on wooden hanger and let excess water drain off.

5. Repeat steps 3 and 4 twice.

6. After third rinse, allow to dry completely in a well-ventilated area.

14-421.1. ADDITION OF PILE TAPE FASTENER, (OPTIONAL). The addition of pile tape to the lower survival pockets on the TRISAR floatation assembly is to prevent loss of the chemlights and other survival items during a rescue. The addition of pile tape shall be accomplished at intermediate level maintenance at the next scheduled inspection.

NOTE

Addition of pile tape to the lower survival pockets is optional, and shall only be accomplished on TRISAR harness assemblies manufactured prior to August 2004. TRISAR harness assemblies manufactured after August 2004 will have the hook tape relocated to prevent loss of survival items.

Materials Required

Quantity	Description	Reference Number
As Required	Fastener Tape Pile, 1-inch Black	MIL-F-21840 NIIN 00-978-0113

1. Open lower pockets and measure length of current fastener pile tape on pocket flaps.

2. Cut the required lengths of 1-inch pile tape. Place the 1-inch pile tape against the edge of the current pile tape on flap and sew in place, backstitch 3/4 of an inch.

14-422. RIGGING AND PACKING.

14-423. Inspect survival items in accordance with applicable chapter of this manual. To rig and pack the TRI-SAR Harness Assembly, proceed as follows (figure 14-51):

Materials Required

Quantity	Description	Reference Number
As Required	Cord, Nylon Type I (with core strands removed) or Type IA (Coreless)	MIL-C-5040
1	Light, Marker Distress, SDU-39/N	(Note 1)
2	Signal, Smoke and Illumination, Marine, MK-124 MOD 0	(Note 1)
1	Knife, Hook Blade	(Note 1)

Materials Required (Cont.)

Quantity	Description	Reference Number
1	Knife and Scabbard, Diver's	(Note 1)
1	Emerson SAR Knife with Hook Blade	(Notes 1, 2, 3, 4)
2	Chemical Light 6 Inch	(Note 1)
2	Chemical Light 4 Inch	(Note 1)
1	AN/PRC-125 or AN/PRC-149 with C-12631/ PRC-149 Swimmer's Control Unit	—

Note 1. Refer to table 14-1 for procurement information.
2. The Emerson SAR Knife is an alternate replacement to the current diver's knife with scabbard and hook blade knife for the TRI-SAR Harness Assembly only.
3. Funding for the Emerson SAR Knife shall be the sole responsibility of the local SAR command.
4. Refer to paragraph 14-423A for installation of Emerson SAR Knife.

1. Cut an 80-inch length of Type I or IA nylon cord and sear ends. Tie an overhand knot at each end of cord. Wrap cord two turns around one end of MK-124 MOD 0 flare and tie with surgeon's knot. Turns of cord shall overlap with all knots positioned snugly against each other. Route cord to opposite end of signal flare and tie in same manner as above. Cord between ties shall be drawn tight. Secure other end of cord to the left loop located inside the lower left-hand pocket of the flotation vest using a bowline knot. Fake excess cord along length of flare and secure with a rubber band. Install signal flare into the pocket. Repeat procedure for the other flare.

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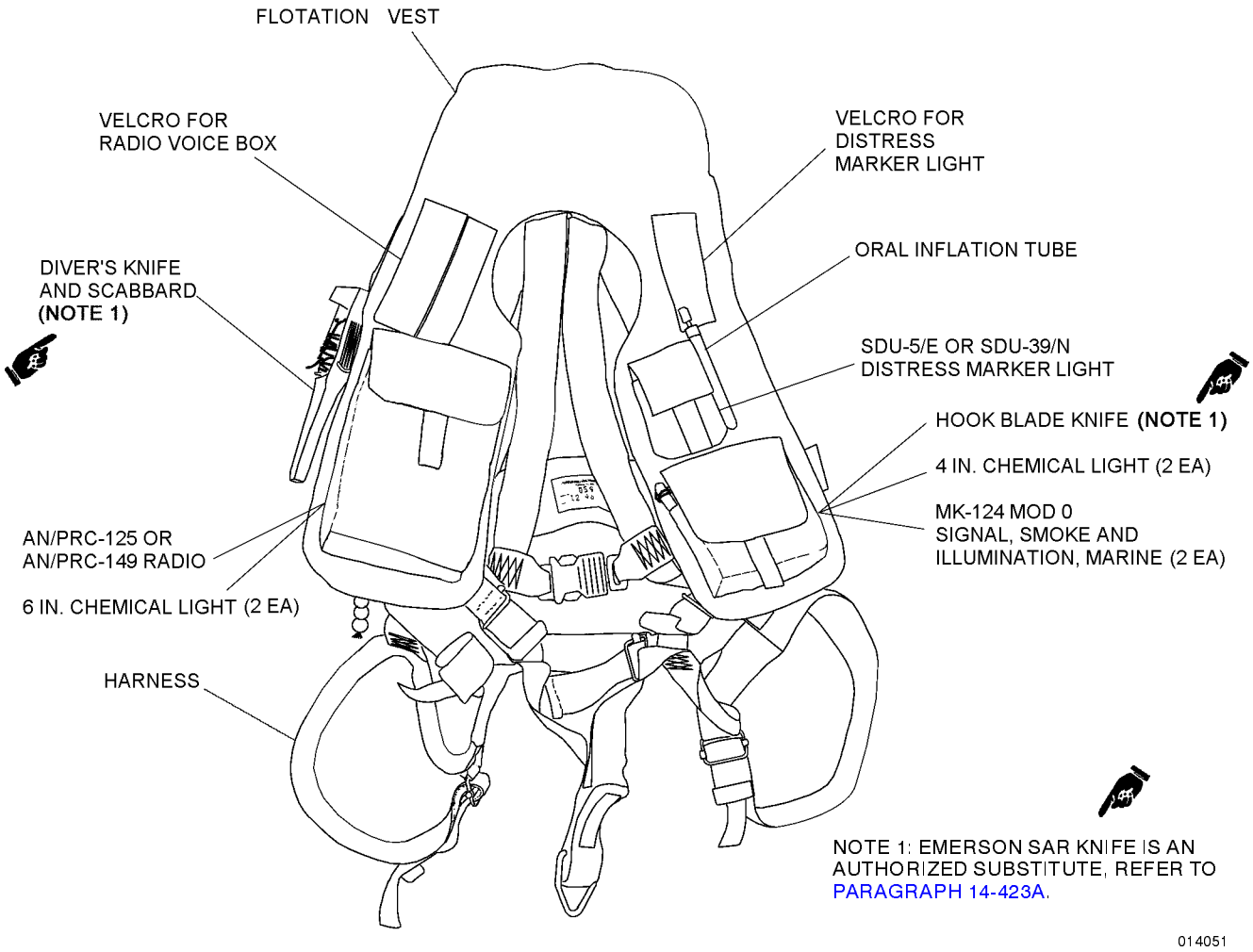

Figure 14-51. TRI-SAR Vest Survival Item Locations

2. Cut a 48-inch length of Type I or IA nylon cord and sear ends. Tie an overhand knot at each end of cord. Pass one end through the grommet in the handle of the hook blade knife and secure with a bowline knot. Secure the other end of the cord to the right loop located inside the lower left hand pocket of the flotation vest using a bowline knot. Fake the excess cord along the length of the hook blade knife and secure with a rubber band. Install hook blade knife into pocket.

3. Configure Distress Marker Light in accordance with Chapter 12. Cut a 48-inch length of Type I or IA nylon cord and sear ends. Pass one end through the hole below the on-off switch of the SDU-39/N, tie end with overhand knot and secure using a bowline knot. Tie an overhand knot at the opposite end of the cord and secure to the loop located inside the small upper left hand pocket of the flotation vest using a bowline knot. Fake cord and secure with rubber band. Install strobe light into pocket with dome facing down and secure pocket flap.

4. Locate the three-inch piece of webbing with snaps located between the folds on the right side of the flotation vest. Weave webbing through the two elongated slots in the knife sheath. Ensure blade end is facing down. Secure snaps. Cut a 48-inch length of Type I or IA nylon cord and sear ends. Pass one end through the hole located at the top of the knife handle, tie end with overhand knot and secure using a bowline knot. Route the other end of the cord through the bottom of the two elongated slots on sheath below the attachment webbing. Tie end with overhand knot and secure using a bowline knot. Fake remaining cord along backside of knife and secure with rubber band. Stow knife in sheath and secure blade end of sheath by securing the two velcro tabs located inside the fold of flotation vest.

5. Install two 4-inch chemical lights in the same pocket as the hook blade knife. Secure pocket flap.

6. Install two 6-inch chemical lights in the left side of large pocket located on the lower right side of the flotation vest.

NOTE

Ensure chemical light protective wrappers are not torn or punctured.

7. (For AN/PRC-125 Survival Radio) Cut a 20-inch length of Type I or IA nylon cord and sear ends. Route one end of the cord through the grommet located on the radio cap webbing of the AN/PRC-125 radio, tie end with an overhand knot and secure using a bowline knot. Route the other end through the right loop located inside the large right front pocket of flotation vest. Tie end with an overhand knot and secure using a bowline knot. Fake remaining cord and secure with rubber band. Stow radio in pocket, route voice box out the top right side of pocket and secure pocket flap. Attach voice box to velcro patch above pocket and route antenna through channel in flotation vest.

NOTE

AN/PRC-149 radio cables that extend from the radio to the Swimmer Control Unit may vary in size. New shorter cables are being introduced to avoid entanglement hazards. Both are acceptable.

8. (For AN/PRC-149 Survival Radio with C-12631/PRC-149 Swimmer's Radio Control Unit) Cut a 20-inch length of Type I or IA nylon cord and sear ends. Route one end of the cord through the hole located on the bottom on the AN/PRC-149 radio, tie end with an overhand knot and secure using a bowline knot. Route the other end through the right loop located inside the large right front pocket of flotation vest. Tie end with an overhand knot and secure using a bowline knot. Fake remaining cord and secure with rubber band. Stow radio in pocket, route voice box out the top right side of pocket and secure pocket flap. Attach voice box to velcro patch above pocket and route antenna through channel in flotation vest.

9. Record inspection date and data on appropriate forms in accordance with COMNAVAIRFORINST 4790.2.

14-423A. INSTALLATION AND INSPECTION OF EMERSON SAR KNIFE (TRISAR HARNESS ASSEMBLY ONLY). The Emerson SAR Knife is an authorized replacement for the current divers knife with scabbard and hook blade knife (figure 14-51A).

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Figure 14-51A. N-SAR (BTS) SAR Knife (Opened)

14-423B. INSPECTION. The knife shall be inspected every 90 days to coincide with the TRISAR Harness Assembly. A complete disassembly and re-assembly shall be performed every 180 days.

14-423C. 90 DAY INSPECTION. Inspect as follows:

Materials Required

Quantity	Description	Reference Number
1	Knife Sharpening Tool Kit	P/N SS2 NIIN 01-430-1570 (or equivalent)
1	Serrated Blade Sharpening Hone for use with P/N SS2	P/N SS24 NIIN 01-430-1554 (or equivalent)

Note: These tools may be available through the command's tool room inventory.

1. Inspect for corrosion. Clean as necessary. Use VV-L-800 or similar product to lubricate knife. Wipe excess with clean dry cloth.

2. Inspect screws for security. If needed adjust the tension screw, (straight slot screwhead), to remove any side to side play in the blade when open.

NOTE

The Emerson website, www.emersonknives.com, has several methods for knife sharpening.

3. Sharpen blade as necessary.

14-423D. 180 DAY INSPECTION. The 180 day inspection consists of a complete disassembly and re-assembly of the knife. Perform 180 day inspection as follows:

Materials Required

Quantity	Description	Reference Number
As Required	General Purpose Grease	MIL-G-23549 NIIN 00-985-7316 or equivalent

NOTE

Lay out disassembled parts in order of removal for easier re-assembly.

1. Disassemble knife and wipe all components with a clean lint-free cloth.

2. Lubricate washers on both sides with a liberal amount of grease.

3. Re-assemble knife and operate to ensure proper assembly. With knife open check blade for side to side play and adjust as necessary.

4. Sharpen blade as necessary.

14-423E. INSTALLATION.

1. Un-snap webbing retainer from knife scabbard and remove diver's knife and scabbard. Re-snap webbing retainer. Retain knife and scabbard for future use.

2. Untie hook blade knife from lower left side pocket. Retain hook blade knife for future use.

3. Cut a 48 inch piece of Type I or Type IA nylon cord and sear ends. Tie an overhand knot at each end. Route one end of the cord through the hole in the knife handle and secure with a bowline knot. Secure the other end to the right loop located inside the lower left hand pocket of the flotation vest using a bowline knot. Secure knife to the side of pocket using the clip. Fake excess cord and secure with a rubber band.

Section 14-24.2. Aircrew Swimmer's Harness (HBU-23/P)

14-424. DESCRIPTION.

14-425. The HBU-23/P (figure 14-52) provides the Rescue Swimmer with maximum mobility and the means to perform rescue operations in the water. A release assembly provides convenient and speedy separation of the survivor and rescue swimmer once both are safely onboard the rescue helicopter. It also provides a means for immediate jettison from the hoist cable in event of an emergency. The HBU-23/P is used in conjunction with the LPU-28/P Life Preserver, refer to NAVAIR 13-1-6.1-2.

14-426. MODIFICATION.

14-427. Limited modification of the swimmer's harness is authorized when necessary to properly fit persons with long or short torso measurements. Refer to paragraphs 14-441 and 14-443 for modification requirements.

14-428. ORIGINAL ISSUE FITTING AND MARKING.

14-429. The concept of fitting as used in this chapter refers to procedures necessary to be followed for components requiring adjustment after rescue harness build-up instructions. Fitting instructions are provided only as a general guide. Because of the wide variation in torso shapes likely to be encountered it is not possible to present detailed guidance. A successful fit depends largely on the skill and experience of the Aircrew Survival Equipmentman in attaching the components to match the aircrewmember's torso contour.

NOTE

The rescue harness must fit the aircrewmember properly to provide maximum comfort and effectiveness during operation. When fitting the rescue harness, the aircrewmember shall be wearing the required SAR equipment.

Lengths of shoulder straps, chest strap and sizes of hook and pile tape are approximate and should be fitted to achieve the best possible fit. HBU-23/P harnesses already in service do not have to comply with the 1 inch fold in step 2 unless chest strap is long enough or is replaced in accordance with paragraph 14-443.

1. Have aircrewmember don harness and adjust shoulder straps to optimum position. Measure and mark free end of shoulder straps 5 ± 1 inches (finished length of strap shall be at a length that is easy for the aircrewmember to grasp.) Sear cut ends, ensure there are no sharp edges. Mark location of free end to the riser strap. Fold each free end of shoulder strap under 1/2 inch and sew in place using 3 rows of stitches parallel and centered with the fold. Using a 1 3/4 inch x 1 inch size of hook and pile tape, locate hook tape 1/2 inch above folded edge of free end riser strap and locate pile tape 1 inch above position marked during fitting. Sew hook and pile tape in place using a 1 1/2 by 3/4 inch cross boxstitch.

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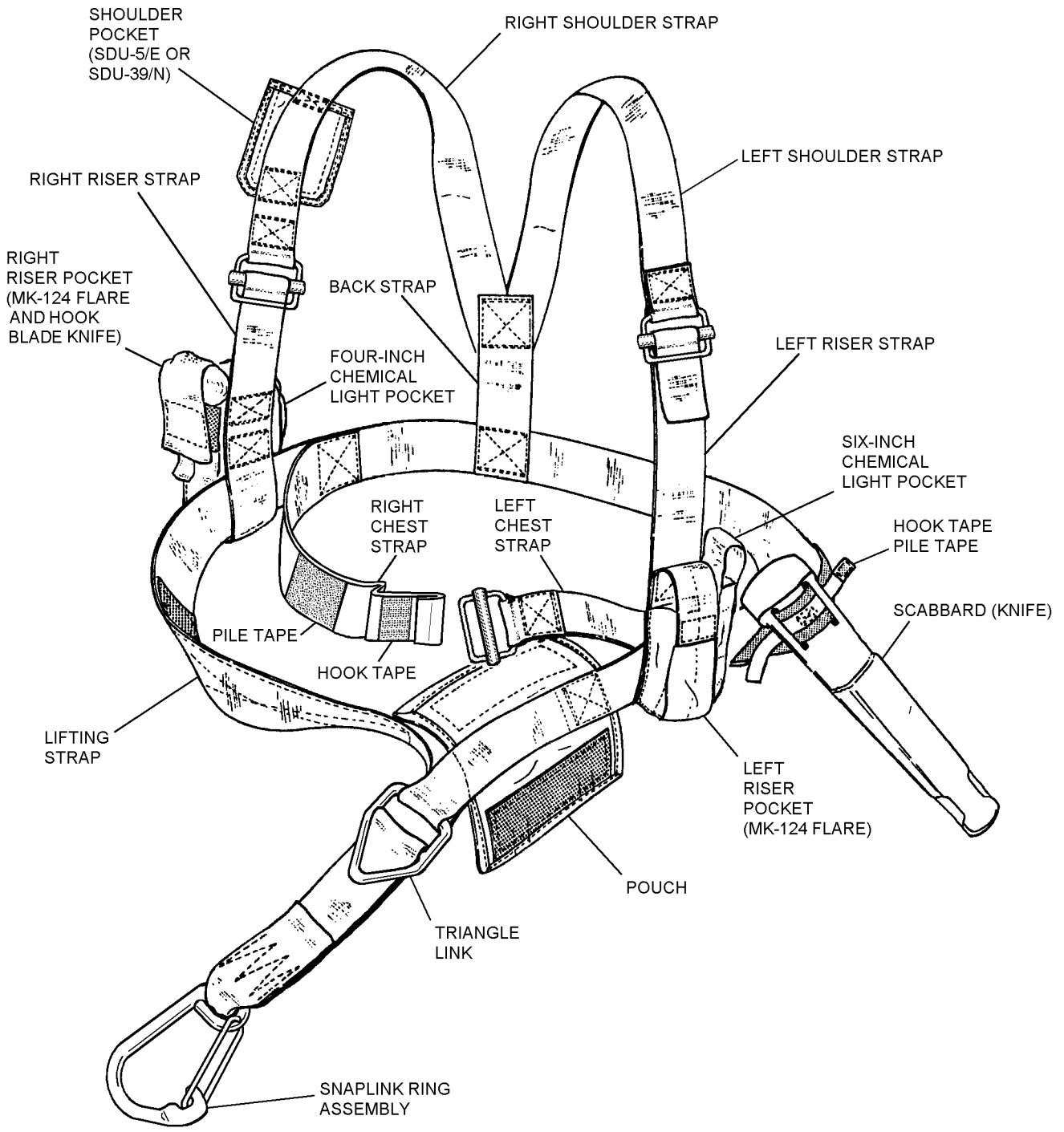

Figure 14-52. Aircrew Swimmer's Harness (HBU-23/P)

2. Adjust chest strap to optimum position, allowing ample room for chest expansion during heavy exertion. Cut off excess webbing from free end leaving approximately 6 ±1 inches from buckle. Sear cut end, ensure there are no sharp edges. Fold free end of chest strap under 1 inch and sew in place using 3 rows of stitches parallel and centered with the fold. Mark position of folded end to the right chest strap. Sew a 2 inch x 2 inch piece of hook tape to the free end of right chest strap. Butt hook tape up against seared end of webbing and stitch in place using a 1 3/4 by 1 3/4 inch cross boxstitch. Sew a 4 x 2 inch piece of pile tape to right chest strap. Center pile tape on postion marked during fitting and stitch in place using a 3 3/4 x 1 3/4 inch cross boxstitch.

NOTE

Location of a scabbard is determined by trial fit on each individual. Mark location when determined. For left-handed aircrewmembers, the knife scabbard may be attached to the right side of the rescue harness.

3. Insert knife scabbard attaching strap, fabricated in paragraph 14-442, through slots in scabbard. Position scabbard on lifting strap slanted to swimmer's left at a 60° angle (figure 14-53). Mark position of scabbard on lifting strap.

14-430. ATTACHMENT OF KNIFE SCABBARD. To attach knife scabbard, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Thread, Nylon, Size E	V-T-295 NIIN 00-204-3884
1	Knife and Scabbard, Divers (See Note)	P/N 7208-00 (SKB) (CAGE 25609)

Notes: Only scabbard portion is required for this assembly. Retain knife for use during rigging and packing.

1. Locate knife scabbard attaching strap on lifting strap at position marked during fitting.

2. Stitch size E thread to attach strap to lifting strap using triangular box stitches. Push back edge of scabbard to stitch as close as possible to scabbard. Do not sew any closer than 1/8 inch from edge of material (figure 14-53).

3. Place each end of the hook and pile tape assembly through the knife scabbard slots.

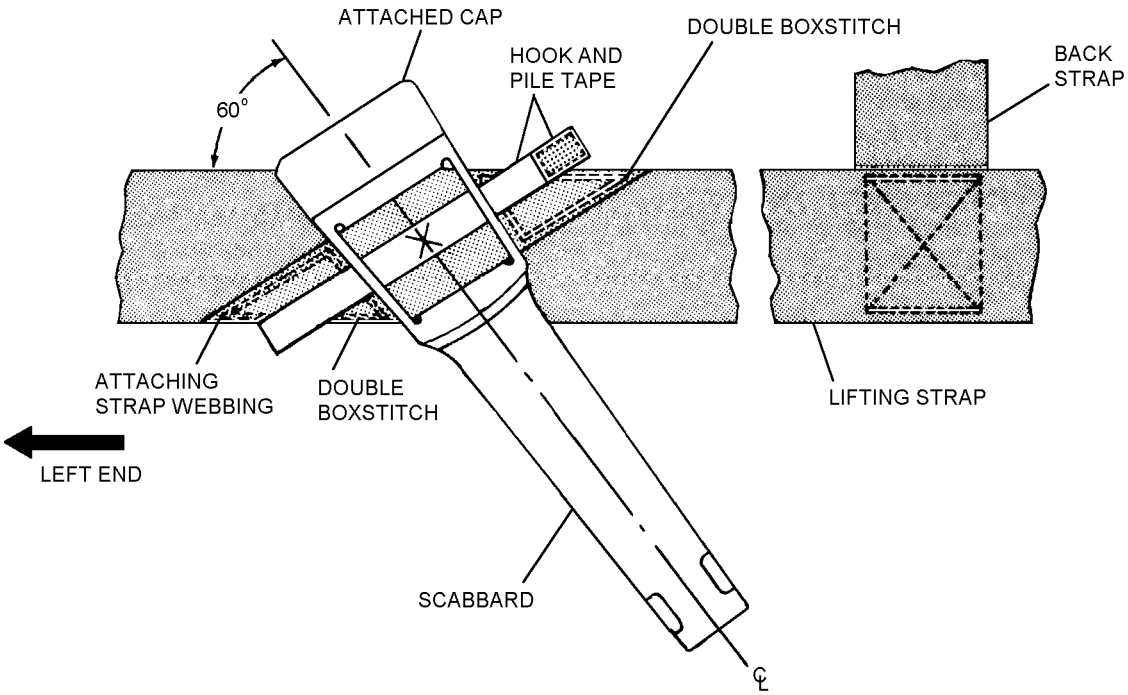

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Figure 14-53. Attachment of Scabbard to Lifting Strap

14-431. MAINTENANCE.

14-432. INSPECTION. The Aircrew Swimmer's Harness shall be subjected to Place-In-Service and Special Inspections. Refer to table 14-1 for all required inspection cycles.

NOTE

Refer to Chapter 9 and 12 of this manual for inspection of survival items.

14-433. Place-In-Service Inspection. The Place-In-Service Inspection shall consist of the following:

1. Visual Inspection (paragraph 14-435)

2. Service Life Check (paragraph 14-436)

3. Original Issue Fitting and Marking (paragraph 14-428)

4. Rigging and Packing (paragraph 14-444).

14-434. Special Inspection. The Special Inspection shall consist of the following:

1. Visual Inspection (paragraph 14-435)

2. Service Life Check (paragraph 14-436)

3. Contamination Inspection (paragraph 14-437)

4. Rigging and Packing (paragraph 14-444)

5. Repair in accordance with paragraph 14-438.

14-435. Visual Inspection. The Visual Inspection shall consist of the following:

1. Inspect harness webbing, front pouch, and pockets for cuts, tears, open seams, loose or broken stitching, and signs of contamination.

2. Snaplink assembly and all other hardware for distortion, corrosion, sharp edges, security of attachment, and ease of operation.

3. Hook and pile fasteners for condition, proper mating, and security of attachment.

4. Ensure presence and condition of survival items.

14-436. Service Life Check. The service life of the rescue harness is 7 years from the date it was placed in service. When a harness reaches the limit of its service life it shall be removed from service and scrapped.

1. When a rescue harness is first placed into service, the date shall be stenciled on the inside of the chest strap using a waterproof marking ink that is visible. The date shall be indicated by month and year; 5-90 would indicate the harness was placed in service May 1990.

2. If a harness does not have a start of service date indicated, service life shall expire 7 years from the date of manufacture. Date of manufacture is stamped on the inside of the chest strap.

14-437. Contamination Inspection. The rescue harness shall be inspected for acid and/or alkaline contamination as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Distilled or Demineralized Water	—
As Required	Test Kit, Alkacid, Full-Range	A-988 NIIN 00-420-0507

CAUTION

Ensure the area of the harness in which test is to be conducted is clear of any source of contamination which could affect test results.

NOTE

A pH reading of 5.0 to 9.0 is in the safe zone. Readings below 5.0 indicate excess acidity and readings above 9.0 indicate excess alkalinity.

1. Dampen suspected area with fresh distilled or demineralized water.

NOTE

Handle test paper by the edges of one end only, to avoid contamination and false readings.

2. Place piece of full-range test paper (0.0 to 14.0 pH) on dampened area. A color change will indicate the approximate pH reading and which specific short-range paper to use.

3. Place short-range test paper indicated in step 2 on the dampened area. Color change indicates the pH factor of affected area. By matching test strip with applicable range color chart supplied with kit, acid or alkaline strength can be determined.

4. If acid contamination is found, the harness assembly shall be considered nonrepairable and scrapped.

5. If alkaline contamination is found, the harness shall be rinsed in cool fresh water and retested until a safe reading is obtained. All fabric and webbing shall then be carefully inspected for any sign of deterioration.

14-438. REPAIR. Repair of the Rescue Aircrew Swimmer's Harness shall be limited to restitching broken or loose stitching and the replacement of the right chest strap. Repair stitches shall be sewn along the original stitch line to 3/4 inch on either side of the broken stitch area using size 6 nylon thread, four to six stitches per inch. Damage of three or fewer broken or loose stitches need not be resewn, but shall be monitored.

NOTE

Harnesses with acid contamination, fabric deterioration, cuts and fraying of harness webbing, and damaged hardware are considered nonrepairable and shall be scrapped.

14-439. CLEANING. The rescue swimmer shall be responsible for cleaning the rescue harness. The harness shall be cleaned as often as necessary to remove perspiration stains, dirt, and other stains which may degrade performance of the assembly. Clean harness assembly as follows:

CAUTION

Do not scrub rescue harness.

1. Soak assembly in cool, fresh water for two or three hours to loosen any set stains or dirt.

2. Drain (do not wring) and immerse in a tub of fresh water, not over 120°F. Gently agitate by hand.

3. After 5 to 10 minutes, drain assembly and clean the tub.

4. Repeat steps 2 and 3 twice.

5. Petroleum and other stubborn stains may be removed by repeated applications of mild soap and water solution. Each application shall be followed by rinse in cool fresh water.

6. Hang rescue harness on a wooden or plastic hanger until dry.

14-440. FABRICATION.

14-441. Fabrication of Modified Back Strap. Fabrication of modified back strap to extend or decrease torso length of rescue aircrew swimmer's torso harness shall be accomplished at intermediate maintenance. Refer to figure 14-52 and proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Webbing, Nylon, Type 13, 1 23/32-Inch	MIL-W-4088, NIIN 00-260-4585
As Required	Thread, Nylon, Size 6	V-T-295, NIIN 00-559-5211

1. Carefully remove existing back strap by cutting stitches binding back strap to the chest strap and vee of shoulder straps (figure 14-53).

NOTE

Ensure stitching which binds shoulder straps in vee position is not damaged when removing back strap. Restitch as necessary.

2. Measure and sear cut required length of MIL-W-4088 webbing and boxstitch to harness assembly using size 6 thread in same positions as strap removed.

3. If necessary for shorter torso length, the back strap may be removed and the vee of the shoulder strap assembly sewn directly to the chest strap using boxstitch and size 6 thread.

14-442. Fabrication of Knife Scabbard Attaching Strap. To fabricate the knife scabbard attaching strap, proceed as follows:

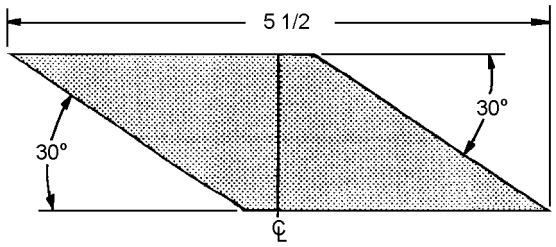
Materials Required

Quantity	Description	Reference Number
As Required	Webbing, Nylon, 1 23/32-Inches Wide	MIL-W-4088, NIIN 00-530-1489
As Required	Thread, Nylon, Size 6	V-T-295, NIIN 00-559-5211
4 1/2 Inches	Fastener Tape, Pile, Class 1, 5/8-Inch Width, Black Olive Green	MIL-F-21840 NIIN 00-935-6763 NIIN 01-010-7204

Materials Required (Cont)

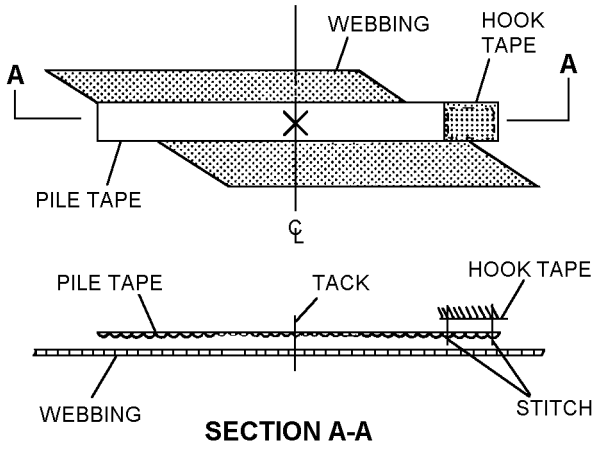
Quantity	Description	Reference Number
3/4 Inch	Fastener Tape, Hook, Type II, Class 1, 5/8-Inch Width, Black Olive Green	MIL-F-21840 NIIN 00-935-6762 NIIN 01-010-7203
As Required	Thread, Nylon, Size E	V-T-295 NIIN 00-204-3884

1. Cut a 5 1/2-inch length of webbing and trim ends at 30° angles. Sear ends.



Step 1 - Para 14-442

2. Cut a 4 1/2-inch length of pile tape and a 3/4-inch length of hook tape. Attach hook tape to one end of pile tape, with back of hook tape facing back of pile tape, by stitching around the edges of the hook pile. Tack pile tape to knife scabbard attachment strap at pile tape center with size E thread, double two turns, tie off with a surgeons knot followed by a square knot.



Step 2 - Para 14-442

14-443. Fabrication and Replacement of Right Chest Strap. To replace the right chest strap, proceed as follows:

WARNING

Replacement of the right chest strap is limited to one time replacement due to the degradation of webbing by removal and replacement of stitching. Replacement of the right chest strap will increase length to allow for aircrewmember growth or for changes in wetsuit ensemble configuration.

Materials Required

Quantity	Description	Reference Number
30 Inches	Webbing, Nylon, Type XIII, O.D. 1 23/32-Inch	MIL-W-4088 NIIN 00-260-4585
As Required	Thread, Nylon, Size 3, O.D.	V-T-295 NIIN 00-559-5212
4 Inches	Fastener Tape, Pile, 2-Inch	MIL-F-21840 NIIN 00-926-4930
2 Inches	Fastener Tape, Hook 2-Inch Wide, Black, Olive Drab, Sage Green	MIL-F-21840 NIIN 00-916-8399 NIIN 00-926-4931 NIIN 00-405-2267 NIIN 00-151-6479
As Required	Thread, Nylon, Size E	V-T-295 NIIN 00-204-3884

1. Locate the right chest strap on the harness. Using a suitable marker, draw a single line on the lifting strap where the chest strap is sewn to the lifting strap, to use as a landmark for the replacement chest strap.

2. Remove right chest strap by carefully cutting stitches securing the chest strap to lifting strap.

3. Measure and sear cut a 30-inch length of webbing. Locate the landmark line drawn on the lifting strap in step 1.

4. Place one end of the 30-inch length of webbing on the landmark and sew the chest strap to the lifting strap with a 1 1/4-inch cross boxstitch, using size 3 nylon thread with 6 to 8 stitches per inch.

5. Have the aircrewmember don required SAR equipment and the SAR Rescue Swimmer's Harness. Reeve right chest strap through left chest strap adjuster. Adjust chest strap to optimum position, allowing ample room for chest expansion during heavy exertion. Cut off excessive webbing from free end leaving approximately 6 inches of length below adjuster. Sear cut free end of chest strap. (Ensure that no sharp edges exist after sear cutting webbing.)

6. Have aircrewmember doff swimmer's harness. Lay out harness so that right chest strap is laying flat (against the lifting strap). Mark a line 2 inches from the seared end of the chest strap.

7. Fold the seared end of webbing to the line made in step 6 and sew 3 rows of stitches parallel and centered with the fold, using size E nylon thread, 7 to 10 stitches per inch. There should now be a 1 inch fold with approximately 1/2 inch of loose webbing to prevent the chest strap from passing through the adjuster without assistance.

8. Cut a 2 inch by 2 inch length of hook tape and sew the hook tape to the bitter end of the webbing at the fold made in step 7 using size E nylon thread, 7 to 10 stitches per inch. Stitch hook tape in place using a 1 3/4 by 1 3/4 inch cross boxstitch.

9. Turn the right chest strap over, sew a 4 inch length of pile tape centered on the webbing free end, starting at the fold, using size E nylon thread, 7 to 10 stitches per inch. Stitch pile tape in place using a 3 3/4 by 1 3/4 inch cross boxstitch.

10. Have aircrewmember don swimmer's harness and check fit.

11. (CDI) Document inspections in accordance with COMNAVAIRFORINST 4790.2.

14-444. RIGGING AND PACKING.

14-445. To rig and pack survival items onto the rescue harness, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Cord, Nylon, Type I (with core removed) or Type IA (coreless)	MIL-C-5040 NIIN 00-240-2154 NIIN 00-292-9920
1	Light, Marker Distress SDU-39/N (Note 1)	FRS/MS-2000M NIIN 01-411-8535
2	Signal, Smoke and Illumination, MK-124 MOD 0	DL3139734 NIIN 01-030-8330
1	Knife, Hook Blade	823AS101-1 NIIN 01-088-4654
1	Knife, Divers, With Scabbard (Note 2)	358 NIIN 01-278-3007
2	Chemical Lights, 4-Inch	9-74780 NIIN 00-106-7478
2	Chemical Lights, 6-Inch	95270-52 NIIN 01-074-4230

Notes: 1. SDU-5/E is no longer available but can remain in service until it fails inspection. Use flashguard when using SDU-5/E.
2. Attach scabbard in accordance with paragraph 14-430.

1. Cut an 80-inch length of Type I or IA nylon cord and sear ends. Tie an overhand knot in each end. Wrap end of cord two turns around one end of MK-124 MOD 0 signal flare and tie with surgeon's knot. Turns of cord shall overlap with all knots positioned snugly against each other. Route cord to opposite end of signal flare and tie in same manner as above. Cord between ties shall be drawn tight. Secure free end of cord to the loop on flare pocket with a bowline knot. Fake remaining cord along side of flare and secure with rubber band. Repeat procedures for second flare.

2. Cut a 30-inch length of Type I or IA nylon cord and sear ends. Tie an overhand knot in each end. Pass one end through the grommet on the handle of knife and tie a bowline knot. Secure the free end of cord to the loop on knife pocket with a bowline knot. Fake the remaining cord along the length of the knife handle and secure with a rubber band.

3. Cut a 30-inch length of Type I or IA nylon cord and sear ends. Tie an overhand knot in each end. Tie one end to either plastic retainer on the SDU-5/E with a bowline knot. Tie the free end to the loop on light pocket with a bowline knot. Fake the remaining cord along the length of the light and secure with a rubber band.

4. Cut a 30-inch length of Type I or IA nylon cord and sear ends. Pass one end of cord through holes located at bottom of light switch channel on the SDU-39/N. Tie an overhand knot to free end, then tie the free end to the loop on the light pocket with a bowline knot. Fake the remaining cord and secure with a rubber band. Stow faked cord in light pocket.

5. Install diver's knife in scabbard and secure with hook and pile retainer strap.

6. Install 4-inch chemlights in right side pocket and 6-inch chemlights in left side pocket. Secure velcro flap.

NOTE

Ensure chemlight packaging is not torn or punctured during installation.

7. Ensure all survival items have been inspected properly. (CDI) Document inspections in accordance with COMNAVAIRFORINST 4790.2.

Section 14-24.3. LPU-28/P Life Preserver Assembly

14-446. GENERAL.

14-447. Refer to NAVAIR 13-1-6.1-2 for inspection of LPU-28/P Life Preserver Assembly (figure 14-54).

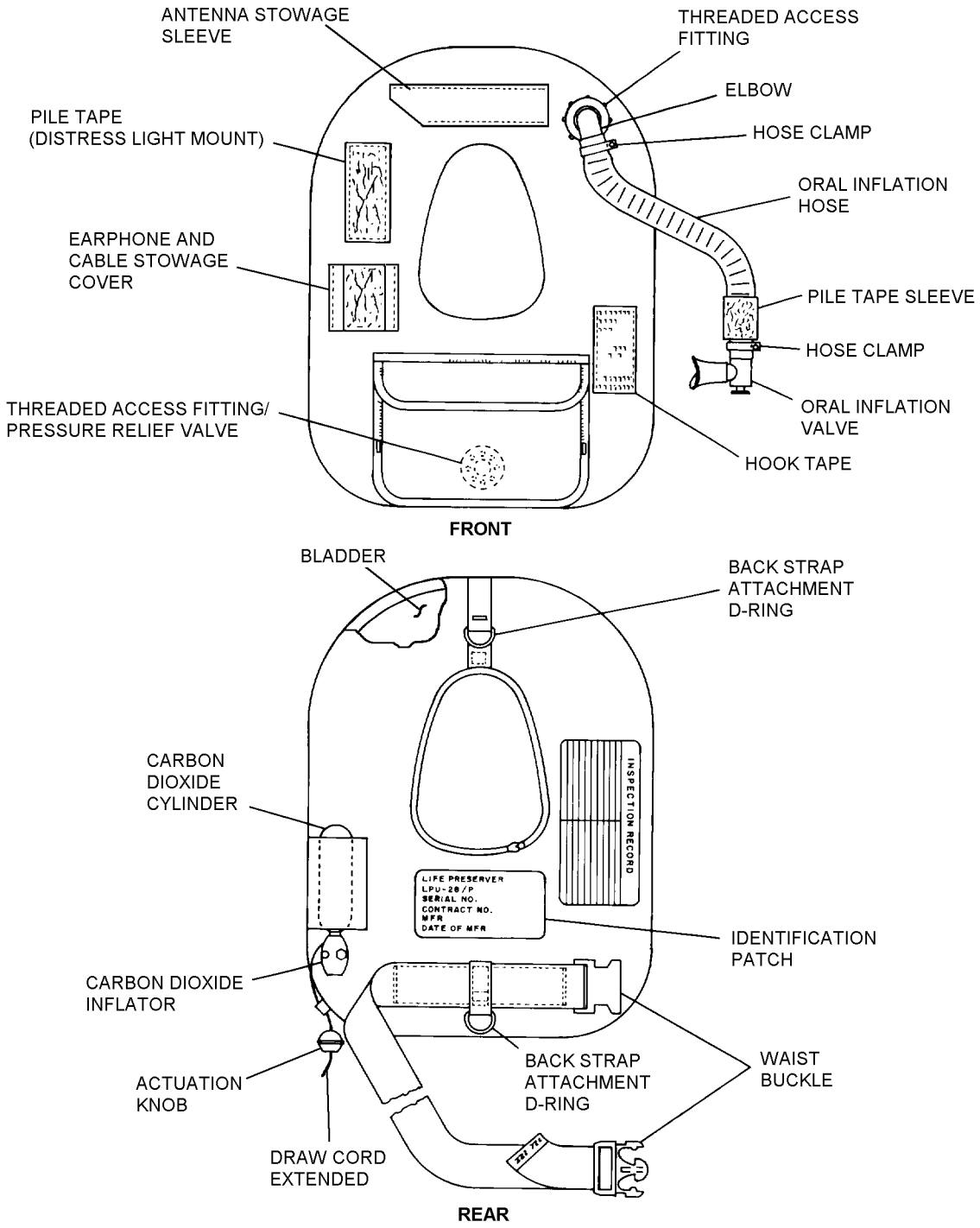


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Figure 14-54. LPU-28/P Life Preserver Assembly, Parts Nomenclature

Section 14-24.4. Helicopter Aircrew Breathing Device (HABD) SRU-40/P Series

14-448. GENERAL.

14-449. Refer to Chapter 16 of this manual for inspection of the Helicopter Aircrew Breathing Device (HABD) SRU-40/P Series (figure 14-55).

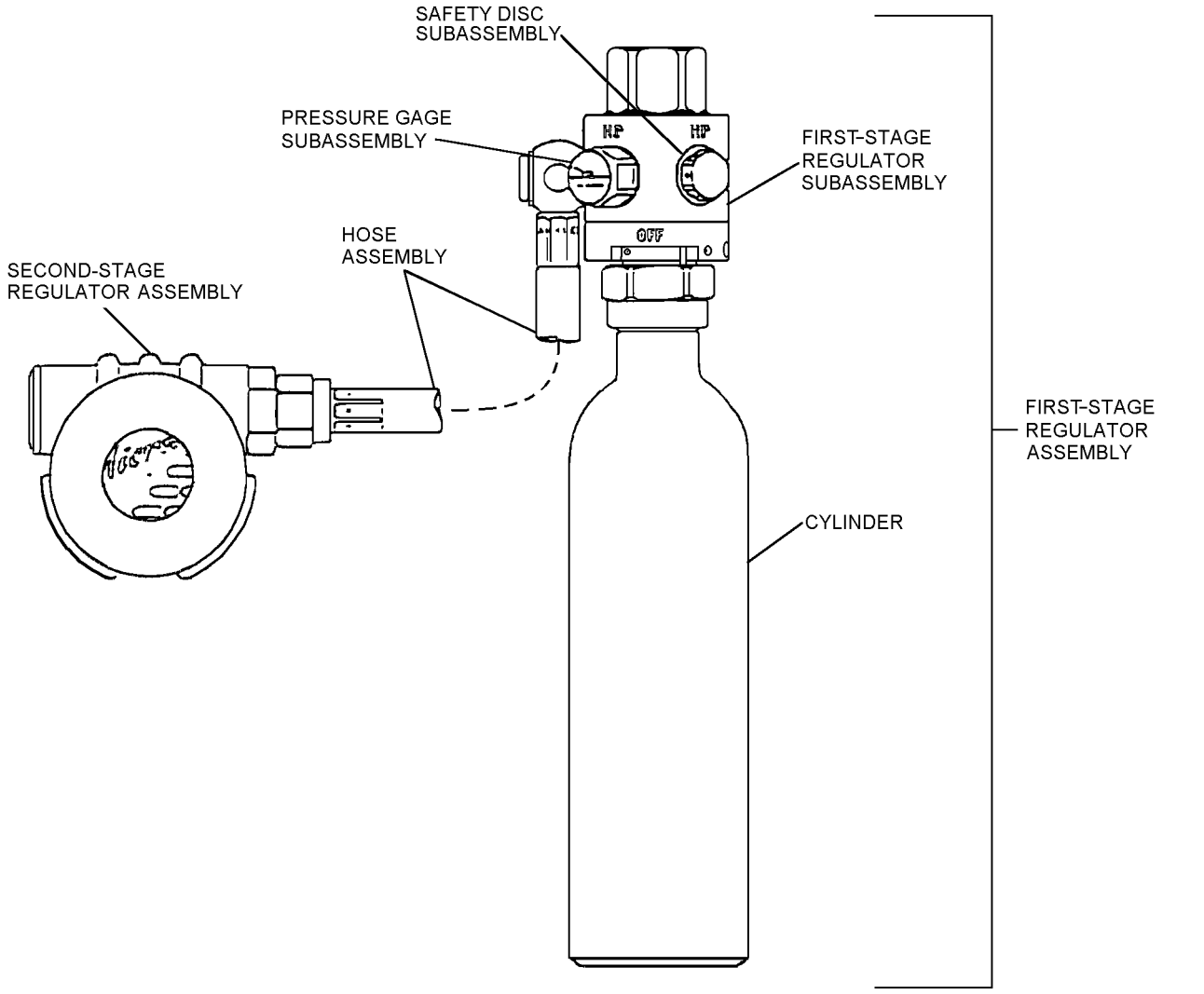

Figure 14-55. HABD Major Components

Section 14-24.5. SAR Helicopter Aircrew Breathing Device Holster

14-450. DESCRIPTION.

NOTE

The SAR Helicopter Aircrew Breathing Device Holster is only authorized for use on the TRI-SAR harness assembly and LPU-28 life preserver.

14-451. The holster (figure 14-56) houses the HABD and is interchangeable between the TRI-SAR harness and the LPU-28. It is authorized for use by SAR swimmers on over-water search and rescue operations.

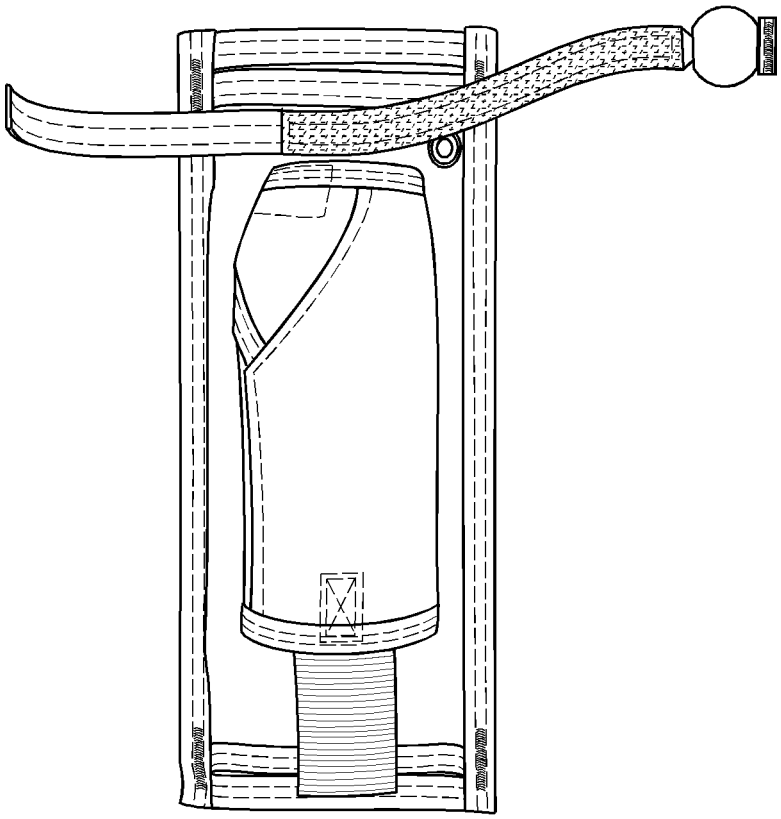

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Figure 14-56. SAR Helicopter Aircrew Breathing Device Holster

14-452. MODIFICATION.

14-453. There are no modifications to the holster that are required or authorized.

14-454. INSTALLATION.

14-455. INSTALLATION OF HABD INTO HOLSTER.

Materials Required

Quantity	Description	Reference Number
1	SRU-40A/P or SRU-40B/P	(Note 1)
1	Mouthpiece Cover	006-53 (Note 2)
1	HABD holster	1006-59 (Note 2)
1	Strap, Tie-down, 10 inch or larger Black or Neutral	MIL-S-23190 NIIN 01-034-5871 NIIN 00-570-9598

Materials Required (Cont)

Quantity	Description	Reference Number

Notes: 1. Use current HABD issued.
2. These items must be opened purchased from the following source:
US Divers, Inc
2340 Cousteau Court
Vista, CA 92083

POC: Government Sales
Comm: 800-252-3483
FAX: 760-597-4914
sryan@aqualung.com

1. Ensure HABD has been inspected in accordance with Chapter 16 of this manual.

2. Open velcro flap on cylinder sleeve. Place the HABD cylinder in the sleeve of holster and secure velcro flaps around cylinder and cylinder neck. Slide hose into the pocket behind the cylinder sleeve ensuring second stage is positioned to the right of the cylinder on grommet side. Rotate second stage so mouthpiece is facing outward away from holster and purge cover is facing the wearer.

NOTE

Do not over tighten. Over tightening of tie-down strap will put strain on the mouthpiece cover which can cause the mouthpiece cover to slip off of mouthpiece.

3. Slide mouthpiece cover onto mouthpiece. Using a tie-down strap, route strap through grommet on holster and mouthpiece cover opening and secure tie-down strap. Cut off excess strap.

NOTE

SAR model manager will ensure that SAR crewmembers are trained on the proper installation of the HABD holster.

14-456. TRI-SAR HARNESS ATTACHMENT. To attach the holster with HABD to the TRI-SAR harness, proceed as follows:

1. Don TRI-SAR harness and adjust for proper fit.

NOTE

A correctly sized and fitted TRI-SAR harness is essential for the proper positioning of the SAR HABD holster.

2. Disconnect chest strap buckle. Hold holster with HABD installed in a vertical position and slide the chest strap through the single vertical webbing strap on the back of holster.

3. Reconnect chest strap buckle. Position holster in the center of the chest area.

14-457. LPU-28 LIFE PRESERVER ATTACHMENT. To attach the holster with HABD to the LPU-28 life preserver, proceed as follows:

WARNING

Placing the holster with the HABD on the left side of the LPU-28/P waistbelt may interfere with beaded inflation handle and cause accidental inflation of the LPU-28/P when deploying the HABD from the holster.

1. Don LPU-28 and adjust waist belt for proper fit.

NOTE

A properly fitted LPU-28 is essential for proper positioning of the SAR HABD holster. The wearer of the LPU-28/P with holster may choose which side to wear the holster. Ensure the top of the HABD is facing forward for easy access.

2. Disconnect the waist belt buckle. Position holster for either right side or left side attachment. Slide waistbelt through the three webbing straps located on the back of the holster.

3. Reconnect waist belt buckle.

14-458. MAINTENANCE.

14-459. INSPECTION. The HABD Holster shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-460. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-461, steps 1 thru 5.

14-461. Special Inspection. To perform the Special Inspection of the HABD Holster, proceed as follows:

1. Inspect holster for wear, rips, tears, fraying and broken stitches.

2. Check grommet for corrosion and security of attachment.

3. Inspect for contamination.

4. Install HABD into pocket in accordance with paragraph 14-455.

5. Attach HABD to TRI-SAR harness or LPU-28/P in accordance with paragraphs 14-456 and 14-457.

6. Repair in accordance with paragraph 14-462.

14-462. REPAIR. Repairs are limited to minor stitching, replacement of grommet and cleaning.

1. Stitching repairs are limited only to those areas of the holster that are accessible by a sewing machine.

2. Re-enforce material for new grommet as necessary.

14-463. CLEANING. To clean HABD Holster, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Cloth, Lint-Free	MIL-C-85043

1. Rinse holster with clean water.

2. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean.

3. Rinse holster a second time with fresh water to remove soap and contaminants.

4. Hang to dry.

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Section 14-24.6. SAR Swimmer's Wetsuit

14-464. DESCRIPTION.

14-465. The SAR Swimmer's Wetsuit (figure 14-57) is an exposure protective assembly designed for continuous wear. It consists of a one-piece trouser, one-piece shorty, jacket, hood and boots.

14-466. MODIFICATION.

14-467. There are no modifications to the Wetsuit that are required or authorized.

14-468. SIZING.

14-469. Use tables 14-12 and 14-13 as a guide to ordering the correct size wetsuit.

NOTE

Sizes that do not cross to an NSN in table 14-1 may be ordered directly from the vendor.

14-470. CUSTOM FIT PROCEDURES. Procedures for ordering custom fit wetsuit apparel are as follows:

1. Custom wetsuits can be ordered via the AMRON International website, www.amronintl.com by fax 760.746.1508 or email: sales@amronintl.com

2. Refer to the custom measuring chart in figure 14-58. A custom measuring chart is also available on the website.

3. Measure individual and submit to AMRON via fax or email.

14-471. MAINTENANCE.

14-472. INSPECTION. The Wetsuit shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-473. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-474, steps 1 thru 5.

14-474. Special Inspection. To perform the Special Inspection of the Wetsuit, proceed as follows:

1. Inspect for cuts, tears, abrasions, deterioration and contamination.

2. Inspect slide fasteners for corrosion and proper operation.

3. Inspect seams for separation.

4. Inspect slide fasteners for ease of operation.

5. Lubricate slide fastener with a light coat of silicone compound.

NOTE

Avoid getting silicone lubricant on wetsuit material. Wipe any excess off with clean cloth.

6. Repair in accordance with paragraph 14-475.

14-475. REPAIR. Repairs are limited to the repairing of minor holes, tears and cleaning. Repairs shall be accomplished as follows:

NOTE

Torn or ripped seams, broken zippers and contaminants containing acids shall render the wetsuit non-RFI and it shall be replaced.

Materials Required

Quantity	Description	Reference Number
1	Wetsuit Repair Kit Note 1	

Notes: 1. Refer to table 14-1 for repair kit ordering.

1. All repairs must be performed on clean dry material.

2. For small cuts, apply 2-3 coats of wetsuit glue (cement) to the surface on either side of the cut. Do not allow the sides to touch each other.

3. Allow each coat to dry approximately 10-15 minutes (until no longer tacky or wet).

4. When no longer tacky, align wetsuit material and pinch both sides of the material firmly together.

5. Adhesion is fully cured in approximately 30 minutes or longer depending on temperature and humidity.

6. For holes and large rips, which require new wetsuit material, cut a properly sized piece of wetsuit material from the material provided in the repair kit and use the same gluing technique as described above.

14-476. CLEANING. Cleaning shall be the responsibility of the SAR crewmember.

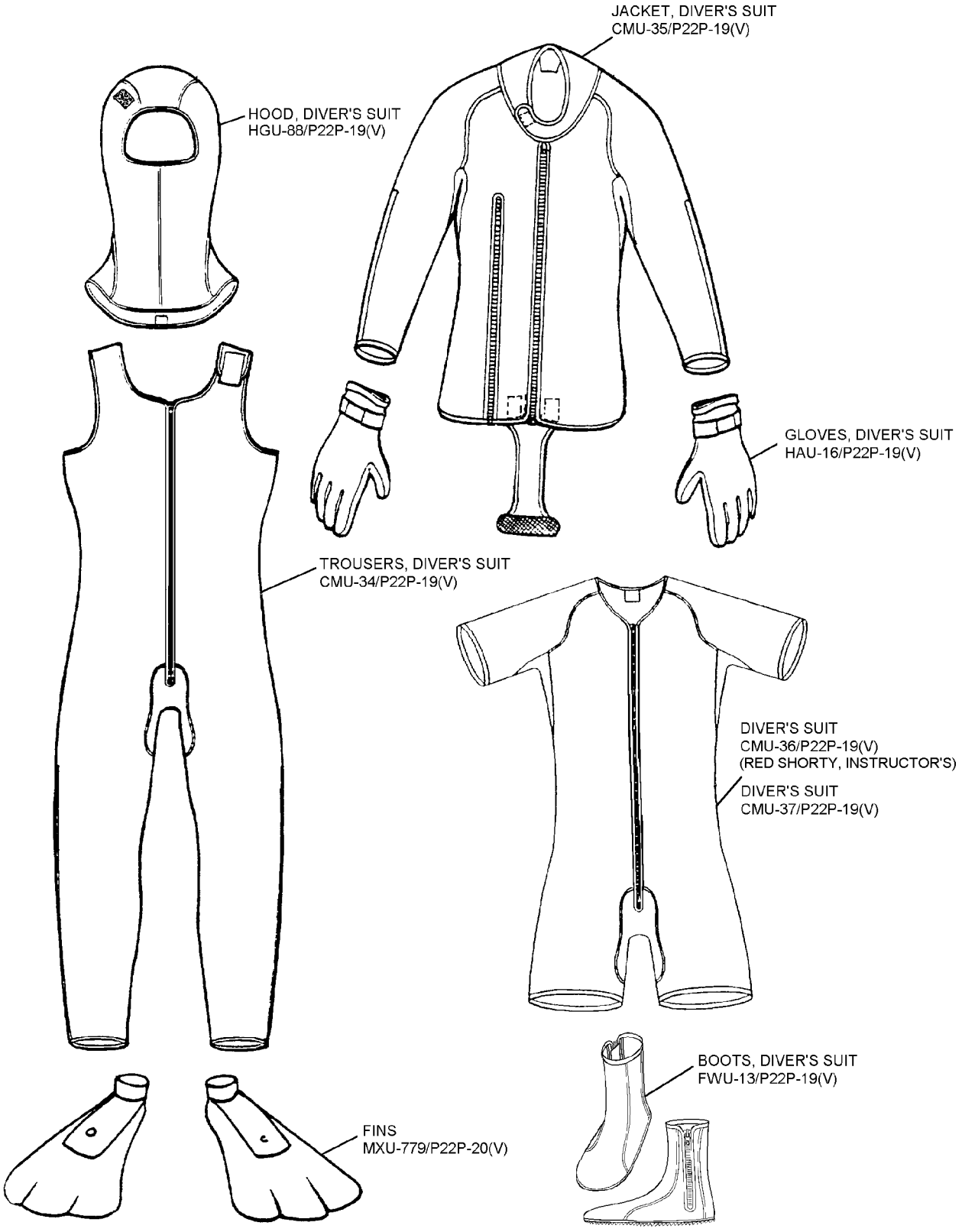


Figure 14-57. Wet Suit, Rescue Swimmer, A/P22P-19(V)

Table 14-12. Men's Standard Size Chart for SAR Suits

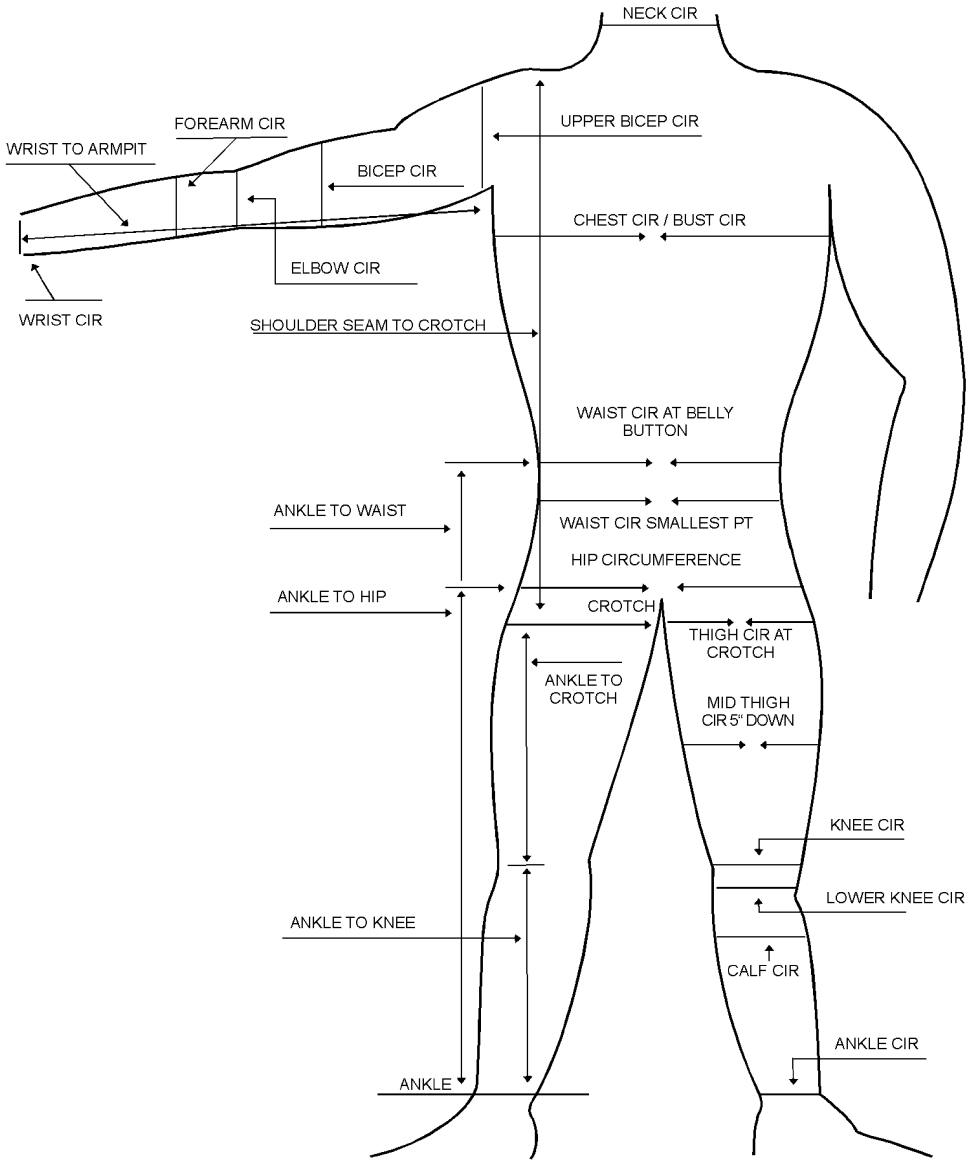
Size	Height	Weight (lbs)	Chest Circumference	Waist Circumference	Leg Inseam	Arm Length
Small	5′5″ to 5′8″	126-140	34-36	29-31	27	18
Small Long (Note 1)	5′8″ to 5′10″	136-145	34-36	29-31	29	20
Medium Short (Note 1)	5′7″ to 5′9″	136-160	34-36	31-33	26	17
Medium	5′9″ to 5′11″	145-160	36-38	31-33	28	19
Medium Long (Note 1)	5′11″ to 6′1″	155-165	37-39	31-33	30	21
Medium Large	5′9″ to 6′0″	160-170	39-41	33-34	28	19
Large Short (Note 1)	5′7″ to 5′9″	165-175	39-41	34-35	27	17
Large	5′10″ to 6′0″	170-180	39-41	34-35	29	19
Large Long (Note 1)	6′0″ to 6′2″	175-190	41-44	34-35	31	21
X-Large Short (Note 1)	5′7″ to 5′9″	175-195	41-44	36-38	27	17
X-Large	5′10″ to 6′0″	195-205	41-44	36-38	29	19
X-Large Long (Note 1)	6′1″ to 6′3″	190-210	41-44	36-38	31	21
XX-Large Short (Note 1)	5′8″ to 5′10″	210-225	44-47	38-40	27 1/2	17 1/2
XX-Large	5′11″ to 6′1″	210-225	44-47	38-40	29 1/2	19
XX-Large Long (Note 1)	6′1″ to 6′3″	215-230	44-47	38-40	31 1/2	21 1/2

Notes: 1. These sizes can be ordered directly from Amron. All other sizes have NSNs assigned. Refer to table 14-1 for list of NSNs.
2. For custom fit sizing, refer to paragraph 14-470 and custom fit chart (figure 14-58).

Table 14-13. Women's Standard Size Chart for SAR Suits

Size	Dress Size	Height	Weight	Bust & Cup Size	Waist	Hips	Leg Inseam	Arm Length
Small	5-7	5′2″ to 5′5″	105-120	32-34 A/B	24-25	33-35	26	17
Medium Short (Note 1)	7-9	5′0″ to 5′3″	115-130	34-36 A/B	25-26	35-37	25	16 1/2
Medium	7-9	5′3″ to 5′6″	115-130	34-36 A/B	25-26	35-37	27	18
Medium Long (Note 1)	7-9	5′7″ to 5′9″	125-135	34-36 B	25-26	35-37	29	20
Medium Large	9-11	5′4″ to 5′7″	125-135	34-36 B	26-27	36-38	27	18
Large Short (Note 1)	11-13	5′3″ to 5′5″	130-140	34-36 C	27-29	37-39	26	17
Large	11-13	5′5″ to 5′8″	135-145	34-36 C	27-29	37-39	28	18 1/2
Large Long (Note 1)	11-13	5′8″ to 5′10″	140-150	34-36 C	27-29	37-39	30	20 1/2
X-Large Short (Note 1)	13-15	5′4″ to 5′7″	140-155	38-40 C	29-31	38-40	26 1/2	17 1/2
X-Large	13-15	5′7″ to 5′9″	145-160	36-38 C/D	29-31	38-40	28 1/2	19
X-Large Long (Note 1)	13-15	5′9″ to 5′11″	155-170	36-38 C/D	30-32	38-40	30 1/2	21
XX-Large	15-17	5′7″ to 5′9″	155-175	40-42 D	32-35	41-44	28 1/2	19
XXX-Large (Note 1)	17-20	5′7″ to 5′9″	175-195	42-44 D	35-38	44-47	28 1/2	19

Notes: 1. These sizes can be ordered directly from Amron. All other sizes have NSNs assigned. Refer to table 14-1 for list of NSNs.
2. For custom fit sizing, refer to paragraph 14-470 and custom fit chart (figure 14-58).



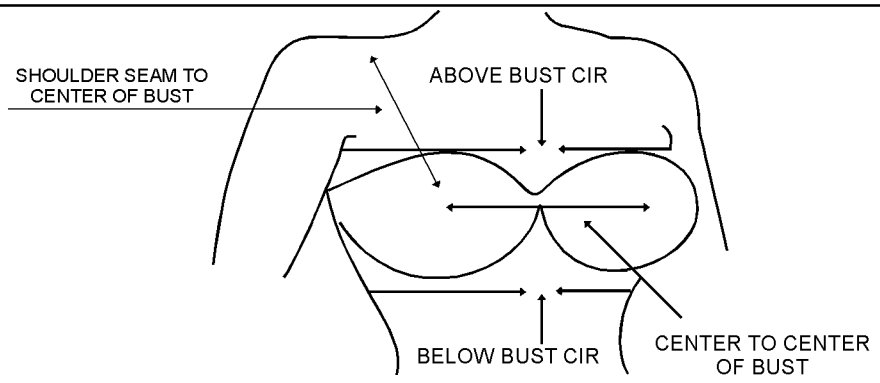
DoDAAC # (UIC)	Command or Company	First Name	Last Name
In Case we need to reach you, please complete the following	Phone	Fax No.	E-Mail

01405801

Figure 14-58. Custom Fit Measuring Chart (Sheet 1 of 2)

Complete the Measurements below and Fax or E-mail to Amron			
Weight		Biceps (4" above Elbow)	
Height		Upper Biceps (nearest shoulder)	
Ankle (1" above knee)		Wrist to Elbow (1" above wrist bone to smallest point of elbow	
Calf (largest point)		Wrist to Armpit (1" above wrist to center of armpit)	
Knee (2" below knee)		Center of Back to Wrist (center back of neck to 1" above wrist)	
Knee (at center)		Shoulder Tip to Tip (across back)	
Thigh (5" from crotch)		Ankle to Knee (1" above inside ankle bone to front center of knee)	
Thigh (at crotch)		Knee to Crotch (front center of knee to crotch)	
Hips (largest point)		Ankle to Crotch (1" above inside of ankle bone to crotch)	
Waist (smallest point)		Ankle to Hip (1" above inside of ankle bone to hip median at largest point)	
Waist (at navel)		Ankle to Waist (1“ above inside of ankle bone to navel median)	
Chest or Bust (largest point)		Shoulder Seam to Waist (center of shoulder to navel median)	
Neck (at center)		Shoulder Seam to Crotch (center of shoulder to crotch median)	
Wrist (1" above bone)		Shoulder Seam to Ankle (center of shoulder to 1" above ankle bone)	
Forearm (largest point)		Head Circumference (at forehead)	
Elbow (smallest point)		Eyebrow to Base of Neck (over top of head)	

Women’s Chest Measurements
Chest above Bust
Chest below Bust
Shoulder to Center of Bust
Center to Center of Bust
Cup Size
Bra Size



01405802

Figure 14-58. Custom Fit Measuring Chart (Sheet 2)

Section 14-24.7. SAR Swimmer's Mask

14-477. DESCRIPTION.

14-478. There are three styles of SAR Swimmer's Mask (figure 14-59). The Wraparound has tempered glass and chemlight attaching bar. The Wraparound II is the same style as the Wraparound and has tempered glass, attachment for chemlight bar and has a black silicone face skirt for a wide range of faces. The wraparound II also has metal adjustment buckles and all metal parts are black in color. The Sherwood Magnum 4 is black in color, has tempered glass and chemlight attachment bracket. The Sherwood Magnum 4 is commonly used for small, hard to fit individuals that do not fit into the Wraparound mask styles.

14-479. MODIFICATION.

14-480. There are no modifications to the mask that are required or authorized.

14-481. MAINTENANCE.

14-482. INSPECTION. The SAR Swimmer's Mask shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-483. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-484, steps 1 thru 4.

14-484. Special Inspection. To perform the Special Inspection of the SAR Swimmer's Mask, proceed as follows:

1. Inspect rubber face seal and strap for cuts, tears, abrasions, deterioration, corrosion and contaminants.

2. Inspect glass for cracks, scratches and security.

3. Inspect chemlight bar or clamp for security of attachment. If required, attach chemlight bar in accordance with paragraph 14-486.

4. Inspect buckles for damage.

5. Repair in accordance with paragraph 14-485.

14-485. REPAIR. Repairs are limited to cleaning, replacement of chemlight bar/clamp, head strap and clips.

14-486. Chemlight Bar Attachment and Replacement (Wraparound and Wraparound II Only).

1. Remove two nuts located at top of mask frame.

2. Place chemlight bar on top of mask frame with plastic bracket opening facing inward.

3. Replace nuts on top of chemlight bar and tighten.

14-487. Chemlight Clamp Replacement (Sherwood Magnum 4 Only).

NOTE

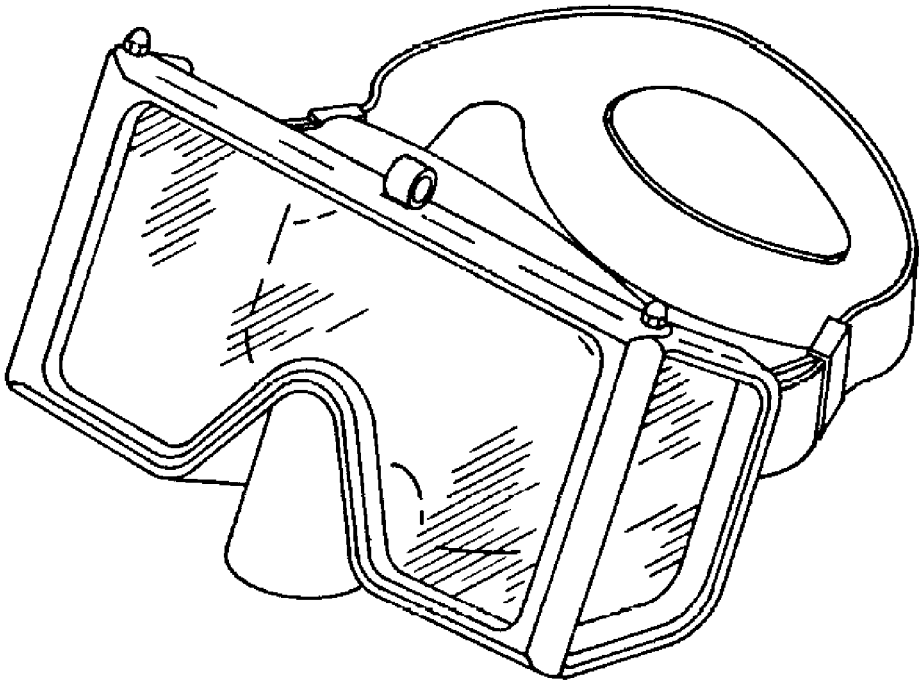
Refer to table 14-1 for parts list.

1. Remove nut from clamp. Be careful not to tear silicone face seal.

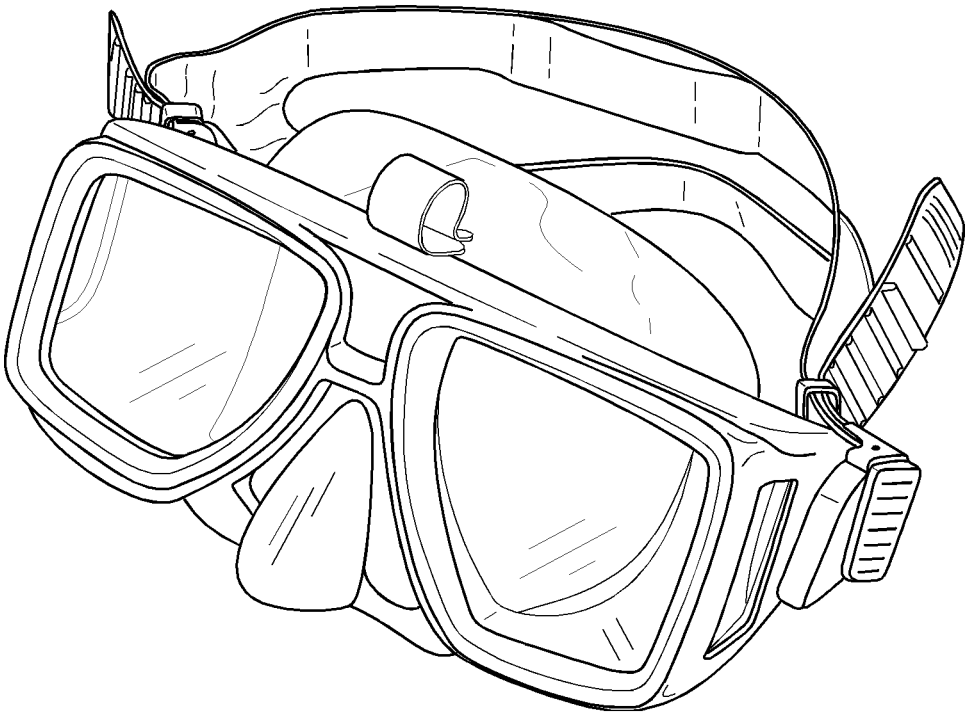
2. Place new clamp on mask frame insert screw from top. Use a new locking nut and tighten.

14-488. Head Strap and Clips. When replacing clips, replace both at the same time.

14-489. CLEANING. Cleaning shall be the responsibility of the SAR Crewman.



WRAPAROUND AND WRAPAROUND II



SHERWOOD MAGNUM 4

014059

Figure 14-59. SAR Swimmer's Masks

Section 14-24.8. SAR Swimmer's Snorkel

14-490. DESCRIPTION.

14-491. The SAR Swimmer's Snorkel (figure 14-60) is made of a flexible hose, soft molded rubber mouthpiece, plastic hose and mask strap.

14-492. MODIFICATION.

14-493. There are no modifications to the snorkel that are required or authorized.

14-494. MAINTENANCE.

14-495. INSPECTION. The SAR Swimmer's Snorkel shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-496. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-497, steps 1 thru 3.

14-497. Special Inspection. To perform the Special Inspection of the SAR Swimmer's Snorkel, proceed as follows:

1. Inspect for cracks, abrasions, deterioration and contaminants.

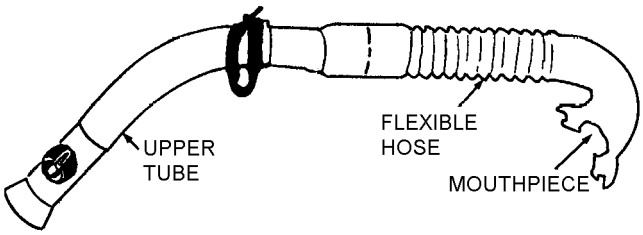
2. Inspect mouthpiece for security of attachment to upper tube.

3. Inspect mask strap for cracks, stretch marks and deterioration.

4. Repair in accordance with paragraph 14-498.

14-498. REPAIR. Repairs are limited to cleaning and the replacement of the mask strap.

14-499. CLEANING. Cleaning is the responsibility of the SAR crewman.



(TYPE 2 ILLUSTRATED)

014060

Figure 14-60. SAR Swimmer's Snorkel, MXK-784/P22P-10(V)

Section 14-24.9. SAR Swimmer's Fins

14-500. DESCRIPTION.

14-501. The SAR Swimmer's Fins (figure 14-61) are made of a solid pliable rubber synthetic material. The strap and buckle are designed to be removed and replaced.

14-502. MODIFICATION.

14-503. There are no modifications to the Swimmer's Fins that are required or authorized.

14-504. MAINTENANCE.

14-505. INSPECTION. The SAR Swimmer's Fins shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-506. Place-In-Service Inspection. The Place-In-Service Inspection shall be performed in accordance with paragraph 14-507, steps 1 through 3.

14-507. Special Inspection. To perform the Special Inspection of the SAR Swimmer's Fins, proceed as follows:

1. Inspect for cuts, abrasions, deterioration and contaminants.

2. Inspect ankle strap for elasticity.

3. Inspect metal buckles for corrosion and security of attachment.

4. Repair in accordance with paragraph 14-508.

14-508. REPAIR. Repairs are limited to the removal of corrosion, cleaning and the replacement of buckles and ankle strap.

14-509. CLEANING. Remove corrosion from metal buckles in accordance with NAVAIR 01-1A-509 manual. All other cleaning shall be the responsibility of the SAR crewmember.

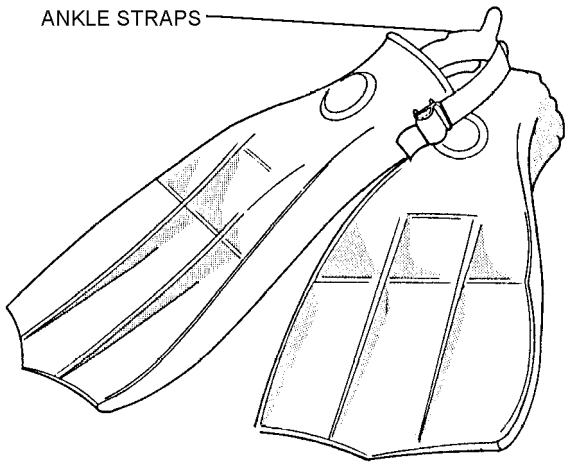


Figure 14-61. SAR Swimmer's Swim Fins, MXU-779/P22P-20(V)

Section 14-24.10. Rescue Mountain Boots

14-510. DESCRIPTION.

14-511. The Rescue Mountain Boots are designed for rough or mountainous terrain.

14-512. MODIFICATION.

14-513. There are no modifications to the Rescue Boot that are required or authorized.

14-514. MAINTENANCE.

14-515. The SAR crewmember is responsible for the inspection and upkeep of the Rescue Mountain boot. Maintenance shall consist of cleaning and polishing to prevent deterioration of the leather. Boots that are damaged or worn shall be replaced.

14-516. INSPECTION. The Rescue Mountain Boots shall be subjected to a Place-In-Service Inspection and a Special Inspection. Refer to table 14-1 for required inspection cycles.

14-517. Place-In-Service Inspection. The Rescue Mountain Boots shall be visually inspected to ensure the boots are not damaged prior to issue.

14-518. Special Inspection. The Rescue Mountain Boots shall be visually inspected to ensure the boots are not damaged.

Section 14-24.11. SAR Signaling Sleeve

14-519. DESCRIPTION.

14-519A. The Signaling Sleeves are a slip-on arm sleeve designed to enhance the visibility, both at night and in daytime. They are made from bright yellow nylon fabric with four 1-inch bands of solas grade reflective material sewn around the sleeves with elastic upper and lower cuffs.

14-520 MODIFICATION. There are no modifications authorized.

14-521. MAINTENANCE.

14-522. INSPECTION. The Signaling Sleeves shall be inspected upon issue and every 90 days thereafter to coincide with the inspection schedule of the assembly in which they are installed.

NOTE

Report Place in Service discrepancies in accordance with COMNAVAIRFORINST 4790.2.

14-523. Place-In-Service Inspection. The Signaling Sleeves shall be visually inspected for rips, cuts, security of reflective tape and elastic bands.

14-524. Special Inspection. Inspect the Signaling Sleeve as follows:

NOTE

To extend life to sleeves, minimize folds to reflective markings.

1. Inspect for rips, cuts, security of reflective tape and elastic bands, abrasions, deterioration, worn stitching and excess wear. Repair in accordance with paragraph 14-525. Clean in accordance with paragraph 14-526.

2. SAR crewman. After exposure to salt water, chlorinated water or chemicals, rinse sleeves thoroughly with fresh water and allow to air dry.

14-525. REPAIR. Repairs are limited to minor re-stitching of broken threads. No more than five repairs per sleeve. Replace sleeves when necessary.

14-526. CLEANING. Hand wash in mild soap and fresh water. Let air dry.

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